



Digitized by the Internet Archive
in 2016

<https://archive.org/details/journalofmichiga17unse>

The Journal

OF THE

Michigan State Medical Society

The Official Organ of the State and County
Medical Societies

Published Monthly under the Direction
of the Council

VOLUME XVII

January to December, 1918

FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
EDITOR

GRAND RAPIDS, MICHIGAN

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVII

GRAND RAPIDS, MICHIGAN, JANUARY, 1918

No. 1

Original Articles

THE TREATMENT OF ERYSIPELAS.

FRANK BURR TIBBALS, M.D.
DETROIT, MICH.

I have long wanted to write a medical paper which would be not only non-scientific but even free from any pretense thereof. My opportunity has now come and I grasp it effusively. The absence of so many of our scientific leaders, in government service, may compel you to listen to worse things before the war is over. Few men are better qualified to speak of the subject matter of this paper than myself for I approach it from the standpoint of considerable experience as attending physician, supplemented by the viewpoint of a very sick and very 'batty' sufferer from the disease. As many of you know, I have taken some of your medicine. The cream of the profession, comprising surgeons, internal medicine experts, alienists, nose and throaters and pediatricians, gathered around my bedside. I do not remember any obstetricians or syphilographers, but with these exceptions all the specialties were ably represented. I enjoyed these many visits from my medical friends and am deeply grateful for their kindness and solicitude, but in absolute fairness to the Science Healer who gave me absent treatment I must admit that his treatment seems fully as efficacious as yours, and much more pleasant to take. Inasmuch as I have followed a certain line of treatment for fifteen years, without seeing a patient dangerously ill or a single autogenetic recurrence, I cannot but wonder if my experience is a fortunate one only, or whether the rank and file of the profession are not familiar with my specific.

Erysipelas is a definite infection of the skin and superficial tissues due to the streptococcus. The constitutional symptoms are those common to the infectious diseases, malaise, fever, de-

lirium perhaps, if the temperature is high. The local symptoms are heat, redness and swelling, a red line of inflammation marking the spread of the infective process. The routine treatment in common use is that of tonics and alternatives, such as quinine and iron, with whatever pet application each physician may favor to control the extension of disease. Probably ice and ichthyol, in 25 per cent. solution with alcohol and ether, or with vaseline as an ointment, are the best topical applications. With this routine treatment it becomes a question of the individual resistance, i. e.; the survival of the *fittest*. That the disease is not more generally fatal may be attributed to the self limiting nature of the infecting organism rather than to any benefit to be derived from such routine treatment. I was packed in ice until I shall always dread the winter; was painted enameled and polished, and quined internally, and after thirty days had recovered sufficient strength to get down stairs, though with difficulty. As I have never seen an erysipelas patient with so much toxemia and so slow a convalescence my belief in my own method of treatment is correspondingly strengthened.

About fifteen years ago my wife had facial erysipelas. For three days she had a temperature of 105½ with rapid spread of infection over the entire face and into the scalp. We then began the use of antistreptococcic serum, in 20 cc. doses every eight hours. After the fourth injection (a total of 80 cc.) the temperature dropped to normal within a few hours and she made a very rapid convalescence. One might think this really wonderful result an accident but for the fact that this has been my invariable experience in a total of about seventy-five cases. It may be admitted that the serum has proven of only occasional value in general streptococcic infections but I believe the antitoxic action of this serum in the special strain causing erysipelas is as specific as is antitoxin in diphtheria.

The whole problem of recovery in infectious disease is that of the early development

of antibodies in sufficient amount to kill the invading organisms and prevent production of their toxic products. Hence the use of serums which carry antibodies in sufficient amount to materially aid nature in the fight is the only logical treatment of infectious disease. We admittedly have, in antitetanic and antityphoid serums invaluable prophylaxis, and in diphtheria antitoxin and, probably, the new gas bacillus serum invaluable treatment. A more general use of antistreptococcic serum in erysipelas will prove or disprove my claim as to its efficacy and that is my purpose in calling attention to the matter. Little has been written on the subject and that conflicting. In my opinion the reason for any failure with this serum in erysipelas is insufficient dosage. Just as many men have expected to cure syphilis with one dose of salvarsan, so have many others tried a single dose of 10 or 20 cc. of this serum and discontinued it when no marked effect was produced.

My method is to inject, preferably into the breast, 20 cc. every eight hours until decided improvement occurs. This is usually indicated by a sharp drop in temperature, to normal or nearly so. I have never had to use over 80 cc. I begin the injections as soon as feasible after the diagnosis is certain. I have never seen a recurrence, a dangerously sick patient, or a long convalescence, where serum in sufficient dosage has been given. One may expect, in perhaps 25 per cent. of the cases, the same urticarial manifestation as follows the introduction of any alien serum. This unpleasant symptom, while a drawback, does not justify us in neglecting this remedial agent any more than the expectation of the same disturbance would excuse us from using antitoxin.

In the few cases in which I have tried vaccines in erysipelas I have found them inert. The best evidence of their inefficiency was a prompt recurrence in two cases. The first case was seen during the summer of 1916. The man had consulted another physician the afternoon before for a swollen ear. When I saw him the following morning a temperature of one degree lead to a provisional diagnosis of erysipelas which became positively clear by afternoon. On my call the next morning I met the other physician outside the house and had him come in with me, and left the patient in his care over Sunday, with the understanding that he was to use serum. On my return Monday I found vaccine, not serum, had been used, and curious to see its effect continued it. The

case ran the usual course of eight or nine days of fever, subsided for a few days and began over again in a most virulent way. Fifty cc. of serum checked it at once and he recovered rapidly without further recurrence.

The second case occurred in my own family as a direct infection from me, and had three distinct recurrences, at intervals of two or three weeks. The first attack was treated with quinine plus local applications, the second likewise plus vaccines, the third with serum only, begun twenty-four hours after the inception of the attack. An initial dose of 20 cc. was given, followed by two more doses of 10 cc. at intervals of twelve hours. Shortly after the last dose all symptoms subsided and the nurse left a day later because there was nothing for her to do. This attack began with temperature of 104 F. None of the toxemia followed this last attack which marked all the others. Complete recovery in four days certainly proved the efficacy of the serum, although a sharp urticaria developed a week later. As this patient had been given the serum fifteen years before some hesitancy was felt as to possible danger of anaphylaxis but our fear proved groundless.

The idea rather commonly held by the profession that erysipelas is a self limited non-fatal disease is, I think, an unfortunate and erroneous one, because the conclusion follows that active or specific treatment is not necessary in a self limited infection which always recovers. While I have not, myself, seen a fatal case, I know of a considerable number. There is sufficient hazard in every case of the disease to make it the duty of every practitioner to utilize any method of treatment which facilitates recovery, and that the use of antistreptococcic serum, in early and sufficient dosage, greatly shortens the illness and accelerates convalescence is, in my experience, an absolute certainty.

CAUSES OF ABORTION.

JAMES E. DAVIS, A.M., M.D.
DETROIT, MICH.

The causes of abortion may be classified under:

1. *Criminal Provocation*: Direct or indirect.
2. *Maternal*: Pelvic diseases, poisons in the blood, affections of the circulatory system, nervous system factors.
3. *Paternal*: Disease, age.
4. *Foetal*: Placental disease, general tissue changes from disease and death.

It is to be presumed that not less than 50 per cent. of all abortions are eriminally provoked, and if the indefinite number incident to pathological changes from previous abortions and miscarriages be added or placed in the indirect class, a higher proportion must necessarily be recorded.

A marked reticence obtains with many patients who are asked for their history concerning abortions and miscarriages and all obtainable statistics are compiled from data which deals largely with incomplete abortion, for it is in this type of cases medical and surgical relief is sought. Titus found 82 per cent. of a series of criminal abortions at the Johns Hopkins Clinic were incomplete, and 78.05 per cent. of this same series were infected, streptococcic infections occurring in 34.37 per cent of these cases.

It can be assumed that the faetor of infections alone from previous abortion predisposes to pathological changes in the uterus and adnexia that will be directly causative of repeated abortions.

In the provocative types of abortion, the decidua reflexa may be punctured from without, through instrumentation or ruptured from within by pressure of the violently contracting uterine muscle thus compelling the expulsion of the embryo from the sac to the free uterine cavity without the cervix yielding. The result therefrom being the so-called missed abortion of Vermehren, (if retained for ten weeks or not more than thirty-one weeks), or the liquor amni and embryo are more or less promptly emptied from the uterus leaving the secundines for a second stage delivery.

Bonnaire tersely gives the French interpretation of the delivery of abortion products by saying, "abortions occur *en bloc* during the first few weeks of pregnancy, while from this time forward they occur more often in two parts until at the fifth month abortion *en bloc* is almost unknown. Criminal abortion, occurring so often in this period is almost always in two parts." When in the third or fourth month there has been a preliminary opening of the ovum and the secundines are retained Bonnaire believes rather than suspects that there has been a culpable intervention.

Burns has observed that in all cases the placenta is retained much longer after the expulsion of the child in abortion, than in labor at the full time. In rare instances the whole ovum is expelled entire and in an excellent state of preservation.

The insufficiency or lack of preparation of the uterine muscle by hypertrophy and hyperplasia of its elements is more often the cause of retention of the afterbirth than the adherence of the membranes to the uterine wall. This is especially true of the cervix, for as Bonnaire says, "it is not prepared sufficiently by softening for the effacement and the dilatation when it is surprised by a travail so preecocious."

The uterus permits the escape of the ovum in one of three ways:

First, by regular effacement from above downward, like a spinning top; the cavity levelling itself with that of the uterus.

Second: In primipara the external os may remain stiff and the ovum lodges in the inferior segment of the cervix.

Third: In multiparae with hard, scarred cervices effacement of the cervix may not be possible and contractions may force the egg through the cervix without shortening. This occurs in the hemorrhagic type during the first few weeks.

If the interval between the delivery of the two parts of an abortion exceeds 24 hours, there is produced the "complication mere," (complication mother) of the abortion. This complication mother has two daughters: hemorrhage and infection.

The available statistics upon criminal abortion show an alarming increase in the number of cases occurring from year to year. Doleris in a series of 103,830 pregnancies in eleven French hospitals records 8.2 per cent. of abortions, and during the last six years of this period the number of abortions were tripled.

Bonnaire points to an increase from 0.5 per cent. to 23 per cent. in 25 years, of abortion from all causes and attributes the enormous change to alcoholism, tuberculosis and syphilis.

Hirst says there is one abortion to every four or five deliveries at term. Whitehead has calculated that at least 90 per cent. of all married women have aborted.

Bacon estimates 20 to 25 per cent. of all pregnancies terminate in abortion. It would appear that the medical profession which is entrusted with the responsibility of human life and its health is not fulfilling its obligation to the ignorant, uninformed and eriminally disposed individuals who in so many instances kill or cause to be killed so many of the unborn young.

There is a most frequently expressed belief upon the part of mothers and fathers that viability marks the beginning of life and it seems

that all too infrequently the physician consulted does not discharge his responsibility by most emphatically teaching the truth to these who either do not know or do not want to know. It is the plain duty of physicians to vividly portray the consequential pathology of abortion.

It should be emphasized again and again that a very large number of all abortions in which there are retained secundines and infection, are criminally provoked.

Under the maternal, paternal and foetal causes of abortion syphilis is a most frequent factor. The wide variation in the figures given by different writers concerning its frequency arises from the difficulties of its early recognition.

The tissues of abortion products are difficult to recognize while those from a miscarriage are easily diagnosed. Warthin has demonstrated that the tissues, if stained promptly after death with the Levaditi stain, may show the spirochetes whereas after some hours have elapsed recognition is impossible.

The placenta was found by Frinchesse to be infected in 25 per cent. of his cases. Mracek affirms that in 50 per cent. of these cases the impregnated ovum is not infected early.

The statistics of Sandberg, Ebeler, Commandeur, Dührssen, Polak, Franz, McPherson, Hergott, Lockner, Rentoul, Doleris, Fabreet, Rhenster, Titus, Brion, Dorland, Evans and Pauli show that in 657 syphilitic women there were 35 per cent. of abortions.

There are doubtless many tissue changes in the maternal and foetal organisms that are remote results of syphilis yet classification is given under some other cause as in dwarfed and deformed embryos and in metabolic insufficiencies. In cases where a clinical history is obtained of multiple abortions and severe hemorrhages occurring from the third month onward and the histology is that of the conception product separated through the spongy layer of the decidua; with interglandular bridges torn through in certain areas and consisting of necrotic tissue, the blood vessels supplying these bridges showing actual thrombosis, in others narrowing of the lumen by active proliferation of the endothelial lining and fibrous tissue cells surrounding the walls, we are quite certain of a diagnosis of syphilis.

Unintentional abortion is very frequently caused by syphilis; Ruge estimates that 83 per cent. of the premature labors and still births are due to this cause.

Young in an excellent monograph studied the changes incident to early pregnancy and pointed

out with great clearness the vascularization changes induced by the chorionic cell substance. And herewith one can easily comprehend the effect of syphilis because of its frequent elective involvement of blood vessels and interception of normal physiological changes at this critical formative period.

Decidual endometritis is a cause of abortion for 52 per cent. of infected cases and 68 per cent. of uninfected cases, the occurrence of infection in these cases is regarded as an incidental. Titus found 62.22 per cent. of his uninfected cases of abortion had decidual endometritis and 30.13 per cent. had retropositions of the uterus. Abnormal ante positions were found in only 2.74 per cent. and adherences from tubo-ovarian masses in 8.22 per cent. In all he found 41.19 per cent. of his cases had uterine malpositions. In the same series infections occurred in 45.06 per cent. of the cases or in the ratio of one in every 2.2 cases. Mortality occurred in 52.27 per cent. of the infections from the streptococcus and there was no mortality from any other type of infection.

Uterine retropositions are the most frequent cause of spontaneous abortion, the resulting decidual endometritis being a secondary matter and possibly only an exciting cause while the retroposition is the predisposing factor. Menstrual waves occurring at the time of expected menstruation are the periods of greatest liability to abortion.

The staphylococcus, streptococcus and *B coli* are the most frequent organisms found in the acute infections of the uterus and, as previously noted, are associated with decidual endometritis and retropositions. A chronic endometritis from a retained decidua of a previous abortion which has been improperly treated and a retroposition of the uterus will make a very likely predisposition to abortion. Titus found 54 per cent. of 267 cases of abortion gave a history of from 1 to 8 previous abortions.

The changes in the decidua observed in abortion are hypertrophy, atrophy, congestion and hemorrhage, the last occurring most frequently. Acute endometritis is observed more frequently than is the chronic form.

It has been previously mentioned that displacements of the uterus and deciduitis are very frequently associated. Rentoul has observed that retroflexions, retroversions and prolapse are of importance as causative factors of abortions in the order named.

Considering other maternal cause of abortion: lacerations of the perineum have been ob-

served in 14 per cent. of cases recorded by different writers. Lacerations of the cervix according to Wells do not cause a very great number of abortions. Fifty-six women who were not lacerated aborted seventy-eight times, and 138 women who were lacerated aborted 270 times; the proportion here shown is 1.3 : 1.9.

Cancer and intrauterine tumors are frequent causes of abortion. Gonorrhea is not as frequently a direct cause of abortion as is frequently believed but indirectly through changes provoked in the uterus and adnexia it is a very potent cause.

Poisons in the maternal blood from fevers, such as smallpox, pneumonia, scarlatina, (four-sevenths of all cases), cholera, measles, typhoid, etc. are frequently provocative of abortion, as is also metallic and vegetable poisons like lead, mercury, ergot, quinine, strychnine and alcohol. The poisons from albuminuria and jaundice are frequently abortifacients.

Of the affections of the nervous system chorea, epilepsy shock and violence produce abortion most frequently.

Epidemic abortions have been recorded by Valpeau in 1811, 1816 and 1821. Other writers have described epidemics arising from infection by the streptococcus and the B abortus of Bang, which have been milk born.

The foetal causes of abortion are most often from placental changes as congestion, placental sclerosis, tumors, edema, fatty degeneration, myxoma fibrosum, p. apoplexy, cystic degeneration, syphilis, endometritis, placentalis villosa, hydramnios, inflammations of the cord with knots and torsion, death and degenerative changes in the fetus.

The paternal causes of abortion are mainly syphilis, gonorrhea, albuminuria, lead poisoning and advance age.

Rentoul records twenty-five men examined at the age of 60 and only seventeen had spermatozoa, of seventy-five who were 70 years of age only forty-two had spermatozoa. At the age of 80 there were only nineteen of fifty-one men who had spermatozoa and four at 90 years of age had no spermatozoa.

PERSONAL OBSERVATIONS OF THE CARREL-DAKIN TREATMENT OF INFECTED WOUNDS.

CAPTAIN ALEXANDER CAMPBELL, M.D., M.R.C.
GRAND RAPIDS, MICH.

During the last few months the War Department through the Surgeon General's office has arranged a number of courses of instruction for

officers of the Medical Reserve Corps. This instruction consists of an intensive study of the causes, character and management of war diseases and war injuries, the magnitude and virulence of which exceed those of any other war in the history of the world.

One of the most important and instructive courses given is that on the Carrel-Dakin treatment of infected wounds under Dr. Alexis Carrel at the War Demonstration Hospital of the Rockefeller Institute. Nearly all the patients in this hospital are treated by Dakin's solution, or some other form of chlorinated antiseptic.

It has been the writer's privilege to have recently completed this course of instruction and it seemed to him that first hand observations, rather than reflected ones, might be of interest to other surgeons who have not actually acquainted themselves with the details of the treatment as taught and practiced by Carrel himself.

It is difficult to describe in a short paper a treatment which is surrounded and fortified by so many experiments of scientific interest, for nearly every detail is the result of laboratory research combined with a delicately adjusted and accurate surgical technic. Each officer taking this course of instruction is required to perform many of these experiments himself.

Dr. Carrel was in charge of the course of instruction and gave daily clinical demonstrations and lectures exhibiting patients who were being treated with Dakin's solution and other antiseptics. His keen and close scrutiny of a wound and his observations on every little detail pertaining to the technic of his treatment was very illuminating, while his surgical deductions impressed one that he is a man with sufficient scientific ability, logic and imagination to entitle him to blaze the trail along some of the darkened pathways that lead to surgical progress.

A definite program of lectures and demonstrations was arranged on the principles and technic of wound sterilization, and practical experience was given the officers concerning such work as preparing and testing Dakin's solution, observing with experimentations its bactericidal effect both *in vivo* and *in vitro*, taking of smears from wounds, staining and counting the organisms, and so on.

We observed most interesting experiments on the action of Dakin's solution on the bacillus Welchii which has been so prevalent during the present war. Bull's experiments led him to believe that death from the bacillus Welchii

is not produced by a blood invasion but by powerful toxins produced in the growth of the bacilli in the tissues of the body, and he demonstrated at the Rockefeller Institute in our presence that Dakin's solution will neutralize this toxin successfully. He has produced an antitoxin which he believes will prevent gas gangrene.

Lectures and demonstrations were also given on the mechanical cleansing, surgical treatment and secondary sterilization of wounds, and the use of the overhead Balkan frame suspension apparatus for the immobilization, suspension and continuous extension of limbs, all these in combination with the use of Dakin's solution.

When one sees the Carrel treatment of infected wounds he is surprised to realize that its principles have not been grasped before. It is a singular fact that at the commencement of the present war wounds were almost as badly infected as during our civil war and Carrel well states that until recently practically no systematic research has been carried out with a view to improvement in the treatment of wounds and that in spite of the toil of many surgeons wounds suppurate to-day as freely as ever. It is amazing that while a half a century ago Lister discovered that carbolic acid disinfected wounds, until recently there has never been any accurate way of determining the effect of the concentration of antiseptics when applied to tissues, and ever since Lister's time antiseptics of all kinds have been used without any accurate way of determining what value, if any, they possessed.

This to the writer's mind in the key note of the Carrel-Dakin treatment, namely the application to an infected wound of an antiseptic of known strength that will sterilize the wound bacteriologically with a minimum amount of irritation, and that if a wound is bacteriologically sterile it will heal in spite of and not because of any antiseptic that may be applied to it.

So far as the writer is aware Dakin and Carrel were the first who accurately tested the strength of concentration of any number of bactericidal substances that were to be used on wounds. In 1915 they tested many substances and realized that the problem consisted in using an antiseptic on the principle enunciated above, namely that it should have sufficient antiseptic power and that it should not irritate the tissue. Too much credit cannot be given to Dakin, an American chemist, who after examining two hundred different substances came to the conclusion at that time that a solution of hypo-

chlorite of soda of a certain strength would render wounds sterile and produce a minimum amount of irritation.

In order to carry out this treatment it must subscribe to the following requirements: First, Dakin's solution must be accurately made and carefully and frequently titrated. Second, it must be administered according to the Carrel technic in every detail. Third, bacterial examination of the wound must be made at frequent intervals to determine the effect of the antiseptic. In order to carry out this technic a vigilance and co-operation of patient, nurse and physician must be continuous. No one should criticize this treatment without thoroughly familiarizing himself with it for much criticism has undoubtedly arisen from surgeons who really have never seen it properly used.

Carrel and Dakin's experiments demonstrated that a solution of hypochlorite of sodium whose content of hypochlorite was between 0.45 and 0.5 per cent. and which was very slightly alkaline was the ideal preparation and it was this preparation that was used at the Rockefeller Institute as a routine treatment. There are different methods of preparing this solution, but the method used at the Carrel Clinic was a simple one which consisted in the action of chlorine on sodium carbonate. A certain amount of chlorine is run into a solution of sodium carbonate and by use of a simple apparatus a very accurate solution can be made in a few minutes and when titrated it will show the proper amount of hypochlorite content. The alkalinity of this preparation is very carefully tested, not only with powdered phenolphthalein but with an alcoholic solution of the same drug. Too much emphasis cannot be placed on the point that Dakin's solution must neither be too alkaline nor too acid.

An electric manufacturing concern in New York City has devised a chlorine generator, by which chlorine in tanks under pressure is used in making Dakin's solution. Arrangements will be made so that these tanks of chlorine can be procured for the army in Europe. Inasmuch as this is the simplest and most accurate method of making the solution, it is probable that it will entirely supplant the method of making it from bleaching powder which is so unstable in its content of active chlorine that it is necessary to titrate every particle that is used. No matter what method is employed in making Dakin's solution, it must be titrated so that the percentage of hypochlorite can be estimated.

Assuming that the solution is absolutely cor-

rect as to its reaction, the next important desideratum is its application to the wound in an appropriate manner.

In their routine work at the demonstration hospital, wounds are cleaned both mechanically and chemically before the Dakin solution is applied. The wounds are minutely examined and cleansed with iodine, and the openings are neatly trimmed and muscular tracts are laid neatly open and necrotic and bruised tissues are carefully excised with as little traumatism as possible. Complete hemostasis is absolutely and completely established because Dakin's solution does not dissolve blood clots. The toilet is completed by washing the wound and skin with neutral soap in the form of a solution of oleate of soda and lastly the wound is dried with cotton pledgets. Cotton is used because it causes less traumatism to the delicate epithelial cells.

Counter opening is rarely employed as a matter of drainage as the object of the treatment is to fill up cupshaped cavities with the solution so that every surface will be in contact with the antiseptic. Bacteriological smears are taken from the depth of the wound and from the most infected part and whatever necrotic tissue is found the bacterial flora is most extensive. The wound is never sutured until the bacterial count is practically nil.

Chemical sterilization of the wound is brought about by conducting the antiseptic liquids through small perforated rubber tubes which go into the various pockets and recesses of the wound. From a reservoir by a system of rubber and glass branched tubing there is equalized distribution of the solution to every part of the wound, while cup-shaped wounds are kept filled by the use of a fenestrated tube which lies loosely in the wound, reaching the bottom of the cavity. It must be accentuated that the wound should always be kept moist for Dakin's solution is very unstable and unless continuously renewed it will be rendered inert by the secretions.

Each wound is treated according to its extent and location and tubes of different length are used and in some instances Turkish toweling is applied over the perforated part of the tube so that the liquid can be spread equally over the surface as it escapes from the minute holes in the distributing tubes. These tubes are maintained in their proper position by the use of adhesive plaster which attaches them to the skin, and the surrounding skin is covered with a preparation of vaseline and paraffin

gauze which is applied to prevent irritation. It has been observed that some patients have an idiosyncrasy toward Dakin's solution, complaining of slight irritation each time the fresh solution is applied to the wound; in such cases a substitute antiseptic should be used. When the tubes are properly placed they are connected with a reservoir by a long rubber tubing of a certain caliber controlled by a cut-off. The height of the reservoir should be from fifty to one hundred cubic centimeters above the level of the bed. The point must be accentuated that one should not irrigate the wound with Dakin's solution, but that it should be constantly moistened and bathed with it, but not flooded. Probably the average amount in twenty-four hours is not more than two hundred cubic centimeters although a thousand may be used without harm if the size of the wound warrants it. There has been devised an electric clock and an electromagneto distributing apparatus by which a definite amount of Dakin's solution is automatically regulated as to time and quantity. We observed that wounds which at the daily dressing were not moist enough did not look as healthy as those that had received a proper amount of the antiseptic.

The tubes are applied directly to the wound without the intervention of any gauze packing. It was observed that when gauze packing was used that it became so saturated with the secreted plasma that it prevented the antiseptic from getting proper contact with every part of the wound. Pieces of gauze saturated with Dakin's solution are placed upon the wound over the tubes and suitable sized pads containing cotton wool or sphagnum moss are placed over the dressing. These pads encircle the limbs if the wound is in an extremity and are caught in front either with safety pins or wooden clothespins. It is an unusual thing to see a bandage used at the Carrel Clinic.

A final survey is made of the entire arrangement of the tubes and dressings before the surgeon feels satisfied that the patient can be left to the care of the nurse for the few hours that intervene before his next visit.

Bacteriological examination of wounds is made frequently and consists in scraping lightly the surface of the wound without producing hemorrhage, selecting that portion which is usually the most infected. Necrotic tissue, exposed tendons and bones are very rich in bacterial growth, and it is always best to take a smear from the part of the wound where one suspects the greatest amount of infection. The smear

is heated and stained and either methylene blue or carbol thionin may be used. We observed that the latter stain was the more satisfactory. Sixty microorganisms per microscopic field were designated as an infinite number and when a wound contained only one or two microbes in five fields it was considered sterile. Suitable charts indicate the bacterial curve and the surgeon reads it with the same interest he would a temperature record. By counting the microbes every two or three days the progress of sterilization can be followed. In the laboratory it was observed that there was a direct relation between the bacterial count and the administration of the hypochlorite solution.

We observed patients with very virulently infected wounds improve in their general appearance very noticeably after a few days' treatment. The improvement in these patients reminded one of that observed in typhoid patients in the afebrile stage of convalescence. We learned that one must depend upon the microscope to determine the infectivity of a wound.

When wounds become surgically sterile, according to bacteriological examination, they can be closed by suture or skin graft, and secondary suture was frequently done within three days after the wound was rendered sterile.

When it is necessary to use pressure to close the lips of a wound, elastic traction is used and bootlace hooks arranged in corset like fashion are used. We saw a number of cases of badly infected compound fractures of limbs treated

with Dakin's solution with most excellent results. The patients with these fractures were put to bed and the limb suspended in a Balkan frame which is an overhead apparatus in which the injured limb can be suspended so that traction and extension can be continually maintained, the limb being placed in a sort of hammock and being equilibrated by the use of weights and pulleys. It was a simple matter to dress these limbs when they were thus suspended and then to apply Dakin's solution.

CONCLUSIONS.

In reflecting upon the observations made upon the Carrel treatment with Dakin's solution the following points stand out most prominently:

1. This treatment when properly followed will make it possible for a wound to heal more quickly than any other method with which the writer is acquainted.

2. Dakin's solution will dissolve necrotic tissue and is an excellent deodorant, but it will not dissolve blood clots.

3. It will dissolve animal ligatures, but has no effect on silk, cotton or silkworm gut ligatures.

4. Infected wounds should be healed and closed under bacteriological control.

5. The Carrel method is not particularly complicated to one trained in its technic. It is a treatment that should be commonly used in civil hospitals.

For some time Dr. Alexis Carrel has been using, in the War Demonstration Hospital of the Rockefeller Institute, for the cleansing of wounds a liquid sodium soap—a neutral sodium oleate. This has been employed with most satisfactory results.

This soap is used to scrub cut an infected wound. A little of it is applied to a pledget of cotton, held with a dressing forceps, and the wound scrubbed with it, more soap being applied to the cotton from time to time until there is a good lather. The wound is scrubbed in this way from the center to the periphery, the soap finally being washed away with water, after which the indicated antiseptic is applied, as, for instance, Chlorazene Surgical Cream.

Neutral Sodium Soap, prepared to meet Doctor Carrel's indications, has been placed on the market by The Abbott Laboratories, Chicago, and is now offered to the medical profession.

K-Y Lubricating Jelly.—The Council on Pharmacy and Chemistry reports that K-Y Lubricating Jelly (Van Horn and Sawtell, New York) originally

advertised as a lubricant for instruments and the hands, is now also recommended as a therapeutic agent. The Council held K-Y Lubricating Jelly in conflict with Rules 1, 4, 6 and 10 (*Jour. A.M.A.*, Sept. 29, 1917, p. 1102).

Alcresta Ipecac.—This preparation of ipecac was admitted to New and Nonofficial Remedies in 1915. Recently claims have been advanced for this preparation which were not contemplated at the time of its acceptance and which appeared improbable and unwarranted in the light of the known properties of ipecac. The Council on Pharmacy and Chemistry brought these extravagant claims to the attention of Eli Lilly & Co., the proprietors of Alcresta Ipecac. As Lilly & Co. would neither discontinue nor modify these claims and did not submit any evidence to warrant them, the Council announces that it has been obliged to delete this proprietary from New and Nonofficial Remedies (*Jour. A.M.A.*, Oct. 20, 1917, p. 1373).

TRANSACTIONS

OF THE

Clinical Society of the University of Michigan

Stated Meetings, October and November, 1917

The President, JAMES G. VAN ZWALUWENBURG, M.D.

Reported by REUBEN PETERSON, M.D.

REPORT OF A CASE OF CONDYLOMA LATA AND CONDYLOMA ACUMI- NATA IN A PATIENT WITH SYPHILIS AND GONORRHEA.

JOSEPH A. ELLIOTT, M.D.

(From the Department of Dermatology and Syphilology,
University Hospital, Ann Arbor, Michigan.)

This patient is a young lady, domestic, 19 years of age and single. She is an American and hails from Wheeling, W. Va. She was referred to this Department by the Department of Genito Urinary Surgery on account of a four plus positive Wassermann reaction, having been under treatment previously for condyloma acuminata and gonorrhea.

Her present trouble began about three months ago when a sore appeared on the genitalia. The lesion was painful and has persisted. About one month ago lesions appeared in her mouth and approximately six weeks ago a large number of hypertrophic lesions appeared on the vulva and about the anus. Her hair has been falling out for two months. She has noticed no deafness, no loss of weight, and has had no bone or joint pains, and no headaches. When she came under observation she had had no specific treatment.

Examination disclosed a well nourished woman of fair appearance. The scalp shows a moth eaten alopecia. The eyes are normal and the pupils react to light and in accommodation. The skin of the face and body is clean except for a general, patchy alopecia over the arms and abdomen. Both the anus and vulva are covered with many hypertrophic papules, cov-

ered with a yellowish discharge. Some of the lesions are cauliflower in shape.

Over the pillars of the fauces are numerous ulcerated lesions covered with a grayish pelticle. There is a generalized shotty adenitis. The reflexes are active. The long bones are negative.

This patient entered the Hospital with a diagnosis of condyloma acuminata, due largely to the fact that the history had been taken previous to the examination, and it was found that she had a gonorrheal vaginitis. In view of this fact, I wish to discuss the differential diagnosis between condyloma lata and condyloma acuminata. We notice here a large number of verrucous lesions. On one lip of the vagina there is a large plaque, and on the inner surface there are a few papules. The interesting feature of the case is the large group of verrucous lesions. We can best understand the differentiation between condyloma acuminata and condyloma lata by conceiving a diagrammatic picture of the two lesions in cross section. Clinically the lesions may appear very similar. Pathologically they are decidedly different. By condyloma lata we mean the moist papules of secondary syphilis. By the term condyloma acuminata we refer to the pointed lesions which are prone to occur with any vaginal discharge. In order to make the differentiation we have to do more than a superficial examination. In condyloma acuminata the epidermis is thickened and thrown into folds and there is an increase in the size of the papillae of the corium. In practically all syphilitic lesions of the skin

the epidermis remains normal, or nearly so, but there is a decided change in the corium consisting chiefly in an infiltration of plasma cells and endarteritis. This pathologic change in the corium constitutes the induration of syphilitic lesions. In condyloma acuminata there is no change whatever in the corium, but there is a marked change in the epidermis, particularly in the prickle cell layer. Therefore, instead of the normal wavy epithelium, the epithelium is thrown into great folds, as in this case. So from observation, one could not distinguish the lesions in this case from condyloma acuminata. However, if by palpating we can determine infiltration, we can say that the lesions are syphilitic.

It is rather uncommon to see lesions of the mixed type. On the other hand, it is quite common to see condyloma acuminata in patients with a chronic gonorrheal discharge. The diagnosis of a mixed lesion therefore lies in establishing the fact that there is induration, indicating an infiltrate into the corium in addition to verrucous lesions. Here we have infiltration. This case therefore is presented as an example of a mixed lesion presenting the essential characteristics of both condyloma lata and condyloma acuminata. The lesions on the labium are purely condylomata lata. Those around the anus and posterior to the fourchette are mixed lesions.

THE CLINICAL APPLICATION OF ELECTROCARDIOGRAPHY.

GEORGE EDMESTON FAHR, M.D.

(From the Medical Clinic, University Hospital, Ann Arbor, Michigan.)

Not long since I was asked by a colleague of excellent clinical and scientific training to decide by means of an electrocardiogram whether a case in which there was an undoubted lesion at the aortic orifice was complicated by a double mitral. Upon informing him that we could only get indirect evidence by this means, which would possibly weigh strongly in favor of, or against the diagnosis of a double mitral, he exclaimed, "Why I thought you could make a diagnosis of any cardiac condition with that wonderful instrument." At a scientific meeting in New York City a very short time ago. I was informed by a physician, whose name

ranks very high in our profession, that "that ten days wonder, the electrocardiogram, is beginning to play out." These two remarks represent very well the two types of appreciation which the electrocardiogram receives from the great majority of the uninitiated in the medical profession of both continents.

Both the unbounded expectations of one group and the unwarranted depreciation of the other are due to a lack of understanding of the somewhat difficult physical and complicated physiologic principles which serve as the basis for our interpretation of the curves and to a lack of acquaintance with the clinical information which the electrocardiogram can give us. The electrocardiogram has come to stay in the study of cardiac disorders and it has become an essential part of the equipment for the diagnosis, prognosis and therapy of heart disease in every modern clinic throughout the world even though every question in cardiac disease can not be answered by it. It will not be possible to go into the physical and physiologic foundations of electrocardiography this evening as I shall confine myself strictly to an attempt to acquaint you with some of the information which the electrocardiogram supplies us in cardiac disorders. But before we plunge into the subject of clinical electrocardiography let us recall to mind that the electrocardiogram is essentially a graph of the spread of the wave of electro-negativity which passes over the heart, but as this negativity is closely bound up with the excitation process, the normal electrocardiogram is really a picture of the propagation of the excitation wave from its inception in the sino-auricular node over the auricles and down the auricular septum into the auriculoventricular node and from here by way of the main branch, the right and left ventricular branches, and the outlying arborizations of the His-Tawara conduction system to all parts of the ventricular musculature. But the electrocardiogram is just as well a curve of the spread of the contraction process, for the course of the excitation wave in the heart muscles determines the course of the contraction wave. In other words, the electrocardiogram is a very direct means of examining the heart muscle. Before we examine our pathologic electrocardiograms, let us look at a normal one and review its prominent peaks and their significance.

Here is the electrocardiogram from a healthy young man who became a member of a college crew. The instrument is so calibrated that each millimeter along the ordinates equals a potential difference of one-tenth of a millivolt and the speed of the time marker which produces the ordinates is such that each scale division along the abscissae equals exactly $1/25$ of a second. The upper curve is the so-called lead I. It is obtained by connecting the right and left hand with the galvanometer. The second curve is lead II, obtained by leading off from right hand and left foot. The lower curve is lead III, left hand and left foot being attached to the galvanometer in this case. This small upright wave is the P wave. It represents the spread of the excitation wave from the sinoauricular node over the auricles in the normal heart. When the excitation process starts at some other point or travels abnormally over the auricles the size and shape of this wave changes, that is, it points downward or is diphasic. From beginning of the P wave to the beginning of this sharp group, the Q R S group, the excitation pulse is traveling down the auricular septum to the auriculoventricular node and from here through the right and left branches of the conducting system into both ventricles. We therefore have an accurate measure of the conduction time here in our curve. This small downward peak is the Q wave and corresponds to the passage of the excitation process into the region of the ventricles about the papillary muscles. This upward pike is the R wave and is produced by the excitation process in its spread over the base of the ventricles. This downward pike is the S wave, and represents the shooting of the action-negativity into the apical portions of the ventricles. This normal Q R S group changes its form and size when the conduction process is slowed up or blocked along one of the branches of the conducting system, when one of the branches is lengthened in hypertrophy of the ventricle, or when an extrasystole originates in one of the ventricles. The whole ventricle is in excitation and negative at the end of the Q R S group. Now the excitation begins to die out and as it does not diminish in all parts at the same moment certain parts become more negative than others and this last wave, the T wave, results. Normally this wave is upright because the negativity disappears last at the base of the heart. The P and T

wave are profoundly altered by vagus stimulation. The pike of the R represents the beginning of ventricular systole in the ordinary sense, diastole begins at the end of the T wave. The first heart sound comes just after the R pike, the second at the end of the T wave.

Let us first examine the typical electrocardiograms of valve lesions for, although the form of the electrocardiogram has no direct relationship to lesions at valves, yet as valve lesions are always found accompanied by changes in the size, distribution and quality of the cardiac musculature, we generally find typical and interesting changes in the electrocardiograms. Very often the electrocardiogram will furnish strong indirect evidence in the diagnosis of complicated or obscure valvular lesions at times when the state of compensation is such that typical murmurs are no longer present or percussion and X-ray are impossible.

In the endocarditic and arteriosclerotic forms of mitral insufficiency and mitral stenosis we usually get characteristic curves so that the diagnosis of a mitral lesion can usually be made from them alone. In mitral disease we have a massing back of the blood into the left auricle, the pressure at the end of diastole is greater than under normal conditions, the stretching of the muscle fiber stimulates to more powerful contraction, we get a dilated and hypertrophied left auricle. We should then expect to find an enlarged P wave in our electrocardiogram, representing this dilatation and hypertrophy.

Here is the electrocardiogram of a case of

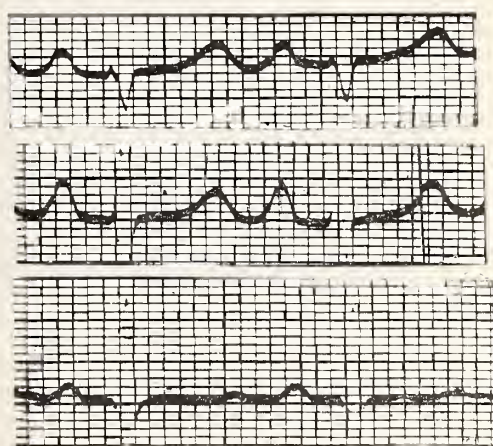


Fig. 1. Mitral Stenosis. Large P. wave. QRS group downward in lead I, upward pointing in lead III, showing right ventricular preponderance.

well compensated mitral stenosis in a young girl of 18. (Fig. 1.) You see here this enormous P wave of 4 scale divisions or $4/10$ of a millivolt. The normal P wave seldom reaches

two scale divisions. The P wave here is nearly as large as the R wave and larger than the T wave. This can only be interpreted as an expression of hypertrophy of the auricles. An enlarged P wave like this in mitral disease gives a relatively good prognosis for it shows the auricle is not fibrillating and that the cardiac impulse is formed at the normal site and is propagated over the auricles in the normal direction. An enlarged P wave can be used in the differential diagnosis of simple aortic valvular disease from aortic disease complicated with mitral failure. Large P waves are rarely found. Lewis says never, except where there is mitral disease with massing back of blood into the left auricle. The predominatingly downward trend of the Q R S group in lead I and the relatively high R in lead III shows a predominance of the right over the left ventricle, that is, a relatively greater enlargement of the right ventricle. This is general in mitral disease though as we know not necessary. In pure mitral insufficiency we nearly always have a large left ventricle. We frequently see a case of more or less pure mitral stenosis at autopsy with a large right and small left ventricle. In a double mitral, the relative extent of the stenosis and insufficiency as well as the power of compensation possessed by the left auricle are among the factors which determine whether we are to get relative right or left ventricular preponderance. I shall soon show you an electrocardiogram from a patient with a double mitral and relative left ventricular preponderance.

This lantern slide shows you another type of P wave often seen in mitral disease. The P wave is large and, in addition, of a complex form. It is long, diphasic and somewhat notched in lead I, diphasic and more distinctly notched in lead II, and of normal height but notched in lead III. This is to be looked upon as evidence not only of an hypertrophy of the auricles but also of sufficient change in the auricular musculature to produce a difference in the topography of the spread of the excitation and contraction wave in the two auricles. We have here I believe evidence that parts of the auricle are undergoing progressive change. This is verified by the electrocardiogram of this patient taken two and a half months later. The P wave is not as high as here, is longer and the notching has disappeared. Just a short time ago this patient came back to the Hospital suffering from extreme heart failure. The electrocardiogram and pulse showed the auricles to be

fibrillating. I have another case under observation with this type of P wave, which changes its form from beat to beat sometimes very markedly. I suspect that we shall get fibrillation of the auricles in this case soon.

Some years ago Samoilof of the University of Kiev published electrocardiograms from a case of mitral stenosis taken within intervals of about one year. In the first electrocardiogram, there is a large split P wave. The patient who came into the hospital decompensated, left well compensated after a short rest and digitalis cure. In the electrocardiogram taken about a year later upon the second entrance in the hospital he found the typical electrocardiogram of auricular fibrillation. The patient was now in such a condition that the process of restoring compensation was very difficult and the prognosis very dubious.

The electrocardiogram is of distinct value in the study of our cases of mitral disease. A large P wave excludes auricular fibrillation. In such a case there is ground for hope that by proper care auricular fibrillation, the greatly feared further alteration in the auricular myocardium in mitral disease, may be prevented or warded off for a long period. A study of electrocardiograms taken at intervals acquaints us with changes in the auricular myocardium.

A large majority of mitrals develop auricular fibrillation and the perpetually irregular and unequal pulse sooner or later. At the same time it must be remembered that auricular fibrillation develops under other conditions and it is of great importance to recognize it, as the prognosis in any given case is poorer, immediately fibrillation sets in and the therapy with sufficient doses of digitalis is indicated.

Here are the records from a case of mitral stenosis accompanied by auricular fibrillation. In this condition, which was first recognized through experimental electrocardiographic studies on animals and clinical electrocardiographic observations upon patients there is an incoordinate rapid twitching of small portions of the auricular musculature. These frenzied contractions do not aid materially in filling the ventricles. Besides, an irregular and rapid series of impulses are transmitted from the quivering auricles to the ventricles.

Here are the electric representatives of some of the twitches present in various parts of the auricles. The twitches are very irregular in their origin, extent and propagation and not all of them cause movements of the string of the galvanometer because of this abnormal ori-

gin and direction of propagation. Often absolutely no evidence of them can be found. Here they are very small. The frequency of the twitches is about 500 per second. Luckily not every twitch succeeds in getting an excitation wave passed down into the ventricles so that the ventricular rate does not get above 200 in general. In our case it is about 100, because the patient is still under the influence of a completed digitalis cure. A short time after the above was taken the patient was again put upon digitalis as he was beginning to suffer from dyspnea and dropsy. After a few days of digitalis a partial heart block was produced, the ventricular rate dropped to about 70 and the dyspnea and dropsy soon vanished. It is in producing heart block in auricular fibrillation and flutter that Lewis and MacKenzie find the most notable clinical effect of digitalis. Digitalis, if continued, produces complete heart block, the ventricle beating in its own rhythm. If the digitalis is continued premature beats or extrasystoles originate in the ventricles. The rate of the ventricles again increases. We get coupled beats in advanced digitalis poisoning.

Here is the electrocardiogram from a case in which the patient's heart had been fibrillating and was seriously decompensated. Digitalis was given in large doses. The heart rate was cut down at first from about 140 to about 70 after seven days' treatment. Then coupled beats appeared. Here is an extrasystole originating in the right ventricle. It is followed immediately by one originating in the left ventricle. Then there is a pause and the coupled extrasystoles begin anew. The rate of the heart is here about 120, so that the original digitalis effect of slowing the heart rate has been lost after excessive dosage. On the other hand the pulse rate was only 60 as there was only one pulse for each double extrasystole.

The first contraction originating in the right ventricle and spreading rapidly to the left gave a distinct pulse because the ventricle was full at this moment and the stretched muscle fibers could get up sufficient tension to overcome the pressure in the aorta. The second contraction beginning in the left ventricle and spreading to the right by conduction came at a time when the ventricles were nearly empty and therefore the fibers not stretched. The resulting contraction was not powerful enough to overcome the pressure in the aorta and no pulse resulted. It is worthy of note that a first and second heart sound was heard, followed very closely by a third heart sound at each coupled beat. This

third heart sound was the first sound of the second ectopic beat. I show here a beautiful record kindly given to me by Prof. Einthoven of Leyden, Holland. This is a record of an electrocardiogram and the heart sounds recorded simultaneously. (Fig. 2.) Above we see first

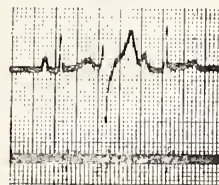


Fig. II. Extrasystole coming immediately after normal beat. Normal beat has normal first and second heart sound. Extrasystole has short first sound and no second sound. Heart sound curve is lower curve.

a normal beat accompanied by a first and second heart sound in their proper places; then there follows immediately after the end of this systole a new systole from an ectopic focus in the left ventricle. This heart beat has only the first heart sound accompanying it. Then after a pause of one-fifth second a new normal heart beat follows and this is accompanied by both first and second heart sound.

We sometimes find paroxysmal tachycardia associated with mitral disease. In these cases there is a series of auricular extrasystoles originating in an ectopic auricular focus. These extrasystoles succeed one another at the rate of about 100 per second. (Fig. 3).

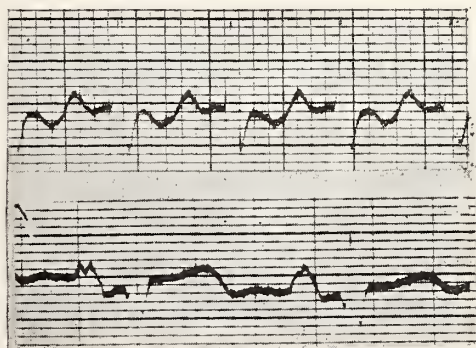


Fig. III. Paroxysmal Tachycardia. Upper curve taken during paroxysm, rate 180. Lower on normal day, rate 80. Note split P wave of mitral stenosis in lower curve, peculiar diphasic P wave in upper curve.

Here is the record from a case which I had at Montefiore Home and Hospital in New York. The lower record is lead II taken on a day when the patient was free from subjective symptoms and the pulse rate was 80. The upper record is lead II taken on the following day when the patient was suffering from palpitation, precordial pain and uneasiness. The rate is

200. The attack came on suddenly without warning and went as suddenly. In the lower record we see the large split P wave of mitral stenosis. In the upper record the P wave is diphasic and partly coincides with the T wave of the preceding heart cycle. This diphasic P wave is the result of the ectopic origination of the impulse. An analysis of the other two leads compels us to conclude that the ectopic focus is in the left auricle. Here the cause of the paroxysmal tachycardia is to be sought in the auricular extrasystoles of rapid rate originating at some abnormal point, here probably the left auricle.

The electrocardiograms found in aortic disease have nothing very characteristic about them. The curves usually show left ventricular predominance, electrocardiograms of which I shall show later. Sometimes aortic disease is associated with auricular fibrillation or with extrasystoles, both of which are clearly shown by the electrocardiograms.

The various forms of arrhythmia, extrasystoles, tachycardia, auricular fibrillation and auricular flutter are the peculiar field of electrocardiography, for abnormalities in the origin and propagation of the auricular and ventricular contraction waves are clearly shown in the electrocardiogram when other graphic methods are silent or the records impossible of analysis.

The condition designated auricular flutter by Jolly and Ritchie is characterized by short or long periods of auricular paroxysm. It comes and goes suddenly and may remain for years. The auricular rate is from 200 up to 300 per minute. The ventricle may follow at this rate but there is generally a 2:1 or 3:1 heart block which causes a slower ventricular rate. The auricular beats originate in an ectopic focus. This is shown by the form of the P wave and by the electrocardiograms taken during vagus pressure. Vagus pressure usually succeeds in blocking the auricles when the beat originates in the sinoauricular node. In flutter the ventricle alone is blocked on vagus pressure, the auricle remaining in its old rhythm. I am now going to show electrocardiograms of auricular flutter under vagus pressure. (Fig. 4).

The patient was on the TB service and the intern noticed a sudden increase in rate which startled him and which ceased all at once. The patient was sent down for an electrocardiogram. When she arrived the heart was beating at the rate of 115 per minute. The upper curve shows the electrocardiogram taken when the patient arrived at the heart station. The auricles are

beating at the rate of about 345 per minute, whereas the ventricle is beating at the rate of only about 115 per minute. As you will see, every auricular wave is not followed by a ventricular group. There is in this case a 3:1 heart block. Perhaps you will have some dif-

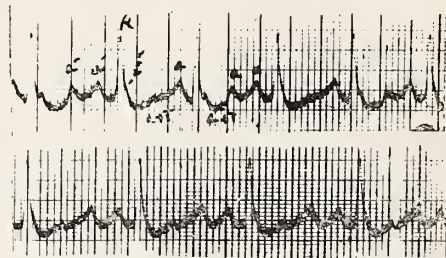


Fig. IV. Auricular Flutter. Upper curve before vagus pressure, rate 115 with 3:1 heart block. Lower curve after vagus pressure, rate 85 with 4:1 heart block. Record taken by Dr. David Felberbaum, New York City.

ficulty in finding the first auricular wave of each group of three because it is fused with the downward limb of the R wave. The R wave in this case should dip farther below the zero position of the string shadow and the first part of the T wave in this electrocardiogram is not a crest but a trough. The P wave of the auricle is superimposed upon this, elevating the trough above its normal position. If you will note that the tops of the succeeding P waves are four scale divisions apart, you will be able to locate the third P wave without any trouble.

The lower curve shows a 4:1 heart block, the ventricle beating now at the rate of 85. This was produced by pressing upon the vagus nerve in the neck. Vagus pressure did not affect the rate of the auricles because the auricular beats were not starting in the sinoauricular node where the vagus controls the rate of the normal auricle. The vagus stimulation on the other hand did succeed in blocking the passage of the excitation wave down the bundle three times out of four. Vagus pressure was now taken off and the ventricle began to beat at the rate of about 155, that is, the rate doubled because now only one impulse from the auricles failed to pass down into the ventricles. The shape of the P wave also indicates that the auricular contractions are beginning in an ectopic focus.

It is the increase in ventricular rate which we fear in our cases with degenerate heart muscle. With a good heart muscle, no venous engorgement, enlarged liver or edema will develop, a thing which always happens in those cases where the heart muscle has no reserve. In the case with good cardiac muscle, palpitation is the most noticeable feature.

By means of digitalis we can produce a ven-

tricular heart block in auricular flutter so that the ventricle will beat at one-third to one-fourth the rate of the auricle. Large doses, continued long enough, will sometimes cause fibrillation. If the digitalis is now stopped in these fibrillating cases we sometimes see a return of the normal auricular beat. That is, the heart beat originates again in the sinoauricular node with a normal rate.

Auricular extrasystoles or premature beats are the source of arhythmies in many cases. The auricular premature beats arise in abnormal foci in the auricles and give an abnormal P wave. Auricular extrasystoles are relatively harmless unless the rate of formation becomes extremely rapid, in which case tachycardia results.

We see here a case of auricular extrasystoles in a young boy of 14 years with a history of scarlet fever, diphtheria and rickets. (Fig. 5).

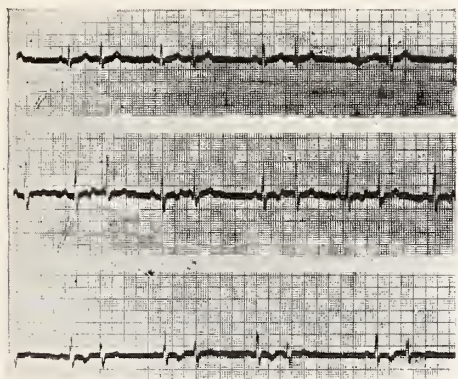


Fig. 5. Coupled beats with pulsus alternans due to auricular extrasystoles. Note peculiar diphasic P wave in second beat of each group of two. Record of Dr. H. B. Williams, New York City.

He was conscious of a peculiar throbbing of the heart when lying down. Otherwise he is normal and able to attend to his school duties and play. We shall examine lead II first. We notice coupled beats in which the first shows a normal P wave and the second which follows immediately is of abnormal form. Please note the large negative P wave, showing that the impulse originates at some abnormal point in one of the auricles. From the pulse which has an alternans character, we might conclude that there was reason for a dubious prognosis. But a case like this gives a very good prognosis so long as the extrasystoles are as infrequent as they are here. Emotional states tend to increase the number of auricular extrasystoles and we are bound to advise against all excitement for patients showing auricular extrasystoles.

Here is another case with auricular extrasystoles even more infrequent than in the pre-

vious case. (Note that there is not compensatory pause). This patient complained of occasional very short attacks of palpitation on excitement. Otherwise he is normal. Undoubtedly the number of the auricular extrasystoles is increased during these attacks of palpitation. We have here the transition to paroxysmal tachycardia. We would speak clinically of paroxysmal tachycardia in our patient, if the attacks of palpitation were increased so that they lasted an hour or so.

We have here the record of an interesting case of paroxysmal tachycardia. The patient, born of humble parents, received a good education, being first in her class and very ambitious to become a teacher. Circumstances forced her to leave high school in her last year and take up a clerical position in the office of a cheap clothing manufacturer. The young lady had developed a taste for certain of the refinements in conduct. She liked to be with nice people of intellectual tastes, etc. The boss did not satisfy her requirements in this direction, his one ambition being to make money. The young lady became nervous, could not sleep nights and complained of a fluttering sensation in the chest. She visited several physicians but nothing abnormal in the heart rhythm was found because she was examined in the intervals between attacks. Finally the attacks became more frequent and a specialist examined her during a true attack of paroxysmal tachycardia and advised an electrocardiogram. This showed a paroxysmal tachycardia due to the formation of rapid beats in a new auricular focus. We see here four normal beats at the rate of 60 per minute, the impulse being formed at the normal sinoauricular pacemaker; then a series of rapid beats originating in abnormal auricular foci, finally a tachycardia of about 220 beats per minute. A case like this does not give a bad prognosis if the cause of the emotional states can be removed. The patient should be brought into a pleasant environment. We very often find cases of paroxysmal tachycardia associated with emotional states such as disappointment in love, failure of cherished plans, death of friends, etc. They generally stop when the cause of the emotion is removed or the emotion dies out. The danger lies in the paroxysms becoming permanent. If then there is a marked dilatation with edema, engorged liver, etc. the prognosis is bad. On the other hand many patients live for twenty years or more with their attacks of tachycardia. They feel well as soon as the attacks stop.

Not all paroxysmal tachycardias are of auricular origin, though it is true most are. (Fig. 6).

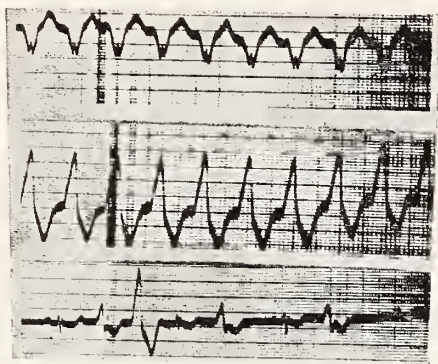


Fig. VI. Paroxysmal tachycardia of ventricular origin. Record of Dr. B. S. Oppenheimer, New York City.

We have here an electrocardiogram of a patient who suffered five days with this tachycardia of about 150 beats per minute. She was decompensated, had enlarged liver and congested lungs. She had been on digitalis outside the hospital but to no avail. Two injections of fifteen milligrams of morphine served to stop the attack, probably by stimulation of the vagus. Later on she had a second attack outside the hospital and this was stopped by morphine as before. This electrocardiogram taken during an attack shows in leads I and II a continuous series of extrasystoles of left ventricular origin. In lead III we have a series of coupled beats with one extrasystole of left ventricular focus. The second beats of the couple is also an extrasystole. In the intervals the patient has always shown isolated extrasystoles arising in the left ventricle. The patient is luetic and the daughter also. Antiluetic treatment has not changed her abnormal heart mechanism because the anatomic changes are already established. She also has an aneurysm of the ascending aorta.

We shall now look at some electrocardiograms of patients with extrasystoles of ventricular origin. This first lantern slide is from a patient with arteriosclerosis. Autopsy showed closure of some of the branches of the coronary artery. The patient suffered from angina pectoris. The extrasystoles originate in the right ventricle nearer the apex than the base. By means of the scheme of the equilateral triangle of Einthoven we can localize the focus of origination fairly accurately. I haven't the time to go into the method of localization here tonight. You will note that the extrasystoles in lead I and II are not followed by compensatory pauses, because the next following beat does not fall in the refractory period of the heart muscle. On the other hand the extrasys-

tole in lead III has a compensatory pause because the next following normal beat originating in the auricle would come during the time that this ventricle is still contracting and refractory. This patient showed extrasystoles every third beat when ocular pressure was exerted, showing that her extrasystoles are due to stimuli coming down the vegetative nervous system and are not due to changes in the heart muscle itself. Einthoven has shown this same thing in experimental morphine poisoning. The morphine poisoned dogs show numerous extrasystoles of right and left ventricular origin which cease on section of the vagus.

The next case is different. Only lead III is shown but it is sufficient for a diagnosis of left ventricular extrasystoles. The patient suffers from arteriosclerosis and has symptoms of angina pectoris. At autopsy, closure of some of the branches of the coronary artery was found.

Heart block gives characteristic electrocardiograms. Here is a 2:1 heart block in a patient with a positive Wassermann who improved upon mixed treatment. He suffered from cardiac asthma and with the improvement of the heart block the cardiac asthma also disappeared. The peculiar notching of the QRS group also indicates hindrance to the passage of the impulse down some branch of the conducting system. That it is only a partial heart block is shown by the fact that the ventricular complex follows the preceding auricular P wave after a definite pause which does not vary from beat to beat.

Here is a case of complete heart block which has persisted for eleven years. There is no history of syphilis and the Wassermann is negative. The patient had a slow pulse and fainting spells at 17. He now has fifteen a day. Nothing helps, neither digitalis nor atropine; he has thrombosis of the right femoral vein now. The ventricle beats at a rate of between 20 and 30. The intervals between the preceding P wave and the next QRS group are variable showing that the impulse to ventricular contraction is not conducted by the conducting system from the auricle. (Fig. 7).



Fig. VII. Complete heart block.

In the next electrocardiogram we see complete heart block. This is shown in lead I by the fact that the interval between the preceding P wave and the beginning of the ventricular complex is of variable length. The patient has

had his heart block for many years and feels well in general. He gets attacks of Stokes-Adams syndrome. He has a large left ventricle, a systolic murmur. He had scarlet fever. The Wassermann is negative. The peculiar QRS group is worthy of notice. Normally lead I would be upright and lead III downward, pointing to enlarged left ventricle if the impulse came down along the normal path. Here an analysis of the QRS group by means of the method of the equilateral triangle shows that the impulse to contraction undoubtedly started in the left ventricular portion of the conducting system. Thus the left ventricle gets its negativity a little sooner than the right. This is further evidence that the block is complete for in enlarged left ventricle the right heart is negative first if the impulse comes down along the normal path.

Lately Dr. B. S. Oppenheimer of New York has called attention to a peculiar electrocardiogram associated with sclerosis of the subendocardial layers of heart muscle; that is, those fibers which contain much glycogen and which belong to the specific conducting system; especially the end arborizations of the same. (Fig. 8).

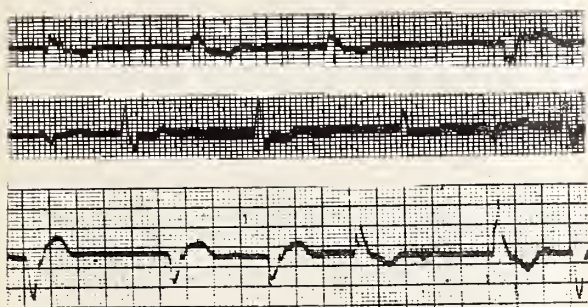


Fig. VIII. Split, prolonged and variable QRS group associated with degeneration of subendocardial layers of conducting system.

Here is the electrocardiogram of one of these cases. The auricles were fibrillating and no P wave is to be seen and the beat is irregular. Note the low, prolonged and split QRS group for this is the chief characteristic of this type of electrocardiogram. In the ordinary electrocardiogram only about 0.08 seconds elapse from the beginning of the Q to the end of the S. In this electrocardiogram we see as much as 0.16 seconds elapse before the completion of the electric variations which cause the QRS group. Note also that there are as many as six distinct pikes or notches to the QRS group here. This all shows that there has been some interference with the spread of the excitation wave over the entire inner surface of both ventricles. You will remember that I told you that the QRS represents the spread of the ex-

citation process from the time it leaves the right and left main branches of the His-Tawara conducting system to be conducted further by the subendocardial layer of endarborizations. Autopsy has shown that these conclusions are justified. In these cases we find sclerotic patches of degeneration occupying the place of the subendocardial muscle fibers.

We not only have interference with the conduction of the impulse to contraction in the endarborizations of the specific conducting system but also in the main branch and in the right and left branch. The former leads to heart block, a few electrocardiograms of which we have seen. The latter leads to a peculiar type of electrocardiogram an example of which I show here. Note the great height of the QRS group, its increased duration and the fact that the T wave in each lead has the opposite direction from the highest point of the QRS group. These are the characteristics of the electrocardiograms of bundle branch block and serve to distinguish it from left and right ventricular predominance which we shall discuss next. In bundle branch block the impulse comes down into one ventricle first, spreads over its inner surface very rapidly through the endarborizations and then more slowly through the rest of the muscle from within outward and across through to the other ventricle. When the negativity starts to die out, naturally it now does so earlier in that ventricle where the impulse first arrived and the result is this diaphasic type of electrocardiogram. Bundle branch lesions are usually of luetic origin. Sometimes gumma press on the branch. At other times there is apparently no lesion demonstrable.

Predominance of right or left sided dilatation gives very characteristic curves. Usually it is said that right or left ventricular hypertrophy can be shown by the electrocardiogram. For various reasons which will come out in my discussion I prefer to speak of a predominance of the dilatation of the right or left side of the heart. Dilatation always precedes hypertrophy. When extra resistance is given a ventricle to overcome, it always begins by dilating, as we know from Starlings beautiful work on the factors governing the dynamics of the heart. This dilatation may soon be followed by hypertrophy. The increase in size of a cavity increases the length of the conducting system and its outlying branches in that ventricle and consequently the other ventricle receives its impulse to contraction earlier and becomes negative sooner. Therefore the direction of the

potential difference in the heart is not the same when one side is negative first and the other follows later as when both are negative at the same time. It is the direction of the potential difference in the heart which determines the direction in which the R is turned in leads I and III. If the the left ventricle is larger than the right then the impulse gets to the right side first and we have the R pike upwards in lead I and downwards in lead III as shown in this electrocardiogram which was taken from a patient suffering from chronic interstitial nephritis with blood pressure 270 mm. Hg. I shall now show the electrocardiogram of a patient with mitral stenosis whose right heart was known to be markedly dilated from X-ray findings and which on autopsy were confirmed. The right heart was much larger than the left and when I measured the length of the conduction path from a point where the left and right bundle separated to the papillary muscles in right and left chamber and from here up to near the base of the corresponding ventricles I found the path in the right heart approximately 6 cms. longer. This is not the place to go into the subject of direction of the potential difference in the heart and the time relations of its turning. I shall say here that my measurements and analyses showed that the impulse got into the base of the right heart about 0.02 seconds sooner than into the left in the above case which would correspond to a conduction time about 2.5 meters per second. I have already published some of these analyses in *Deutsches Archiv für klinische Medizin* in 1915 and shall soon have a paper ready on the subject for a new publication. What I want to emphasize is that we can only determine a relative predominance of the right or left side of the heart with the electrocardiogram. For this purpose it is better than the X-ray in many cases. On the other hand we cannot say whether a heart is large or small if the relative enlargement on both sides is nearly equal.

It has been impossible for me to cover the whole field of clinical application of electrocardiography in the time at my disposal. I have only tried to show you some of the evidence which the electrocardiogram can give us. I believe though that I have shown the kind of evidence which the electrocardiogram can give us, so that you will all know what kind of evidence is to be expected from studies of the electrocardiogram.

Before closing I want to bring out one of the important uses of the electrocardiogram, a use

of which we will make more in the future, I am sure. In acute rheumatic fever the electrocardiogram often gives evidence of myocardial damage before polyarthritic and valvular symptoms develop. At a time when the only other lesion is in the tonsils we often find heart block or get extrasystoles. It takes a comparatively long time for valve lesions to develop. If we wait until they are fully developed valuable time will be lost for it often takes repeated infections to develop them. The good myocardium is of extreme importance in compensating the extra work put upon the heart by valve lesions. By prophylactic rest cures, graded exercises and baths we can often improve the myocardium and make it more equal to its future task. Or we may be stimulated to have tonsils removed or other foci of infection cleared up when we find that the electrocardiogram shows signs of damage to the myocardium. An electrocardiographic tracing will often bring home to us the serious import of otherwise seemingly negligible symptoms.

It can be said without exaggeration, that the electrocardiogram more than any other instrument has stimulated to an intense consideration of the very important subject of the mechanism of the normal and the diseased heart. The electrocardiogram is primarily a record of function in contradiction to the older method of auscultation and percussion which gives us primarily anatomic information. But I do not believe with Lewis that "graphic work has dealt a severe blow to the prestige of anatomic pathology." It is a worthy complement.

Allow me to show a slide of the laboratory of physiology in Leyden, Holland with its director Prof. William Einthoven the father of electrocardiography. To his systematic and untiring efforts the science of electrocardiography is due. Einthoven is the designer of the instrument by which electrocardiography is made possible. This instrument, the string galvanometer, may also be used for recording the heart sounds graphically, as well as the sounds of percussion. It has been used in wireless telegraphy and as a very sensitive recording seismograph. It could undoubtedly be used in the detection of submarines at a distance from the instrument. Prof. Einthoven is a pupil of the great Dutch ophthalmologist and physiologist, Donders. We see him here in his laboratory surrounded by his assistants, two of whom are in uniform as this was taken during the present war, and the Dutch are mobilized as well as all the other neutral peoples of Europe.

LEUKEMIA CUTIS WITH DEMONSTRATION OF CASE.

JOSEPH A. ELLIOTT, M.D.

(From the Clinic of Dermatology and Syphilology, University Hospital, Ann Arbor, Michigan.)

The patient whom I wish to show tonight is an American Jewess, 48 years old, housewife. She comes to the Hospital because of an eruption over the body. Her family history is entirely negative, and her past history is negative. She has six healthy children.

Her present trouble began last winter when she states that worrying would bring on a backache in the lumbar region. She applied a liniment, and the backache left her in the spring. She has continued her housework up until six weeks ago, when she was forced to give it up on account of progressive general weakness and indisposition. Three months ago she noticed intense itching all over her body, followed by the appearance of a minute papular eruption. The lesions were pruritic, but not red. The papules have gradually increased peripherally, until now they are large plaques, itching only periodically. The lesions on the face appeared six weeks ago, and have been unaccompanied with subjective symptoms. The patient has been constipated for years, increased in the last six months. Four months ago she noticed a loss of appetite which has never returned. For the past three months she has had a cough which is very productive, yielding purulent sputum. She vomits about once a day, but believes this is induced by the coughing. There is no shortness of breath, but she complains of occasional palpitation of the heart. She has no fainting spells, and has noticed no numbness, but her feet become heavy after slight exercise. There are mild headaches. In the past three months she has lost twenty-two pounds in weight. She has had no night sweats. There have been no general pains, but of late she has noticed various prickling sensations over the cutaneous surfaces. Her ankles have swollen once during the past six weeks. The patient gets up once a night.

Examination shows a fairly well nourished woman of average appearance. The scalp is clean. The pupils react fairly well to light, and accommodation. The skin of the face, especially on the left side, shows large blotches of a peculiar discoloration, having the appearance of a diffuse hemangioma. The skin of the trunk and extremities in general is of a sallow pale hue. Distributed over the body, and especially over the arms and trunks are numer-

ous infiltrated nodules. For the most part, these are rounded in outline, flat, discrete, raised and vary in size from that of a nickel to that of a silver dollar. In places the lesions seem to have involuted, leaving a brown pigmentation. The active lesions are not inflammatory, but of a slightly darker hue than the surrounding skin. In short, the lesions may be said to resemble very closely the pigmented wheals which one sees in urticaria pigmentosa. The mucous membranes are pale. There is a slight axillary adenopathy. The spleen is hard, firm, and palpable two finger breadths below the costal margin. The Wassermann reaction on the blood is negative.

Leukemia cutis may present itself in numerous ways. There is nothing particularly characteristic about the lesions. One of the conditions which has been described is spoken of as leukemid, and is not a true leukemia cutis, but is nothing more or less than a hemorrhage into the skin. This was first described by Friedrich, Ebstein and Fracnkel, and is the condition which appears on this woman's face. If a patient presents simply a diffuse hemorrhage into the skin we would naturally suspect that this was a septic process, and the only way to make a diagnosis would be from the blood findings. There is also a pruriginous eruption associated with leukemia which closely resembles prurigo Hebra. This is called prurigo lymphadenosis, and has been described by E. Wagner, Buschke and Briesendorf. It is, however, not characteristic of leukemia, but may occur in several conditions involving the lymph glands, such as lymphosarcoma, Hodgkin's disease, tuberculosis, and malaria. Further we may have a generalized erythema of the skin, and this also may be found in the other conditions which I have mentioned.

Lastly, we have two forms of leukemia cutis, the universal form, which is rare, and the circumscribed form, such as we have over the body in this case. This is the more common form, and is seen in acute leukemia, and particularly lymphatic leukemia. It is not pathognomonic because it is exceedingly rare, and resembles some other conditions, such as the early stages of mycosis fungoides. Here again the diagnosis is made from the blood findings. The location of leukemia cutis is fairly characteristic in most cases. The sites of predilection are the face, back of the hands, ears, and chin. Exceptionally we see the eruption over the entire body.

The pathogenesis of the condition has been a question of much dispute among dermatolo-

gists and pathologists. Some pathologists believe that it is a metastasis into the skin, a view founded on the fact that the cells are seen around the blood vessels, where there is a proliferation. Others believe that it is a lymphoblastic proliferation of the tissue. Those who hold this view point to the fact that there are many mitotic figures.

The etiology of leukemia cutis is not known, but it is believed to be associated with some infection. Quite a number of observers have been able to isolate organisms and attempts have been made to demonstrate the tubercle bacillus, but without effect. Orth and Pappenheim have shown rods which were not acid fast, but which produced adenitis in guinea pigs. Arndt has found in some cases acid fast organisms, and he believes that many cases are due to the tubercle bacillus. It may be necessary to take out a pathologic section in order to arrive at the diagnosis. Of course in this case, the blood findings were fairly characteristic, and the biopsy shows a typical picture of leukemia cutis.

DISCUSSION.

DR. L. HARRY NEWBURGH: I want to add to Dr. Elliott's paper the record of another case of leukemia of the skin. This case entered the Medical Clinic for the treatment of leukemia. The cutaneous manifestations were incidental. It was an example of so-called acute leukemia. The whole history ran for four months from the first symptom until death. The subject was a boy of 18, who first noticed increasing weakness and fatigue. Shortly after the initial symptoms, he noticed enlargement of both sides of his neck. These continued to grow, accompanied by more marked weakness and general debility. Next he began to suffer from dyspnea. The fourth event was swelling of the abdomen, chiefly on the left side. At this time he first went to a physician, who put him to bed and treated him for typhoid fever. There was no improvement and he came here two months after the beginning of his disease. Just before entering the Hospital he noticed that his face was discolored. His mother also spoke of the fact but there was very little made of it. He presented all the typical signs and symptoms of acute leukemia, running a continuous fever. There was marked glandular enlargement in the neck, axillae and groins; also a large spleen. He had a very large number of mononuclear cells in his blood and a moderately high white count. There was no question about the diagnosis. At entrance we noted that both cheeks, and an area extending to the chin and back as far as the ears were a dusky copper color. In addition to that the skin was thickened, differing in that respect from this woman. We were unable to feel any nodules. In addition to that he had a very marked, typical

purpuric eruption over the whole body. The skin of his face did not show the same color as the purpuric lesions. It was discolored and had a distinct thickening. The question came up as to whether this was a marked degree of hemorrhage into the skin, or a part of his general tendency to bleed. Dr. Wile at that time thought there was no question as to the nature of the skin involvement of the face. One of the interesting features of the condition was that it increased and decreased irregularly as time went on. When he first came in the condition became more marked. The copper hue and the thickening became more intense and then the condition decreased and later on increased again. He had nothing else in his skin which might be called leukemic. He had a great many hemorrhages from his mucous membranes and great crops of purpuric spots, but in no instance did he have anything which would at all suggest the conditions in his skin.

He also is an example of acute lymphatic leukemia. It is exceedingly interesting as a side issue that he was treated as typhoid fever because cases of acute leukemia are primarily treated for something else, such as myocarditis, sepsis, etc.

DR. QUINTER O. GILBERT: The differential blood count in the case presented tonight is as follows:

Reds 2,295,000, Whites 71,200, Hemoglobin 4.5 per cent. CI $45/45 = 1$.

The count on 300 cells was as follows:

Polys 40 per cent., large lymphocytes 3 per cent., small lymphocytes 2 per cent., eosinophil polys 2 per cent., transitionals 3 per cent., large mononuclears 5 per cent., myelocytes 13 per cent., eosinophil myelocytes 2 per cent., myeloblasts 20 per cent., normoblasts 3 per cent., megaloblasts 7 per cent., total 100 per cent., degenerates 12 per cent.

This is a very peculiar differential blood count for a leukemia. The polymorphonuclear cells are decreased and the elements which are increased are the normoblasts, megaloblasts, myeloblasts and young myelocytes.

On the face of it, this is not then an ordinary leukemia in the sense that we speak of a lymphatic or myelogenous leukemia. I have seen only two bloods which approach this picture. One of them was a patient whom we had here several years ago and whom I have held in reserve to write up because the blood was so peculiar and hard to differentiate. That was a case of very fulminating acute miliary tuberculosis. Preagonally the count went up to a hundred thousand when the blood was loaded with gigantoblasts and cells from the bone marrow.

The first peculiar thing in the case shown tonight is the color index which is one. This is not like a leukemia because in leukemia there is a secondary anemia. It is more like hemolytic anemia and not true leukemia. Furthermore, in leukemia you never get so marked a disturbance in the myeloblasts, normoblasts and megaloblasts which make up 30 per cent. of the group. The other increases

are all from the bone marrow. So this patient has some sort of a condition where there is a stimulation of the bone marrow and we know of such conditions in patients who have an acute infection or some toxic condition which stimulates the bone marrow. It is not a true leukemia in the nature of tumors. So it is a condition where there is a tremendous stimulation of the bone marrow producing a destruction in red cells giving almost the picture of a hemolytic anemia rather than a leukemia. It is very hard in such cases to differentiate between the undifferentiated myeloblasts, lymphoblasts and lymphocytes. I frankly admit that more differential stains should be used on this blood to differentiate the cells.

DR. MARK MARSHALL: I saw this case with Dr. Elliott previously. I was of the opinion that I had a similar case two or three years ago, but after talking with Dr. Elliott, I learned that leukemia cutis was such a rare condition that I thought perhaps I was mistaken. In looking over the notes of the case and comparing the description of the lesions with the lesions which this patient presents, I feel quite sure I was mistaken. I think very likely my case was one of erythema nodosum.

I was interested in Dr. Gilbert's discussion of the differential blood count. I reported a case of miliary tuberculosis three years ago which had a differential count very much the same as this patient but the total count was not nearly so high. I think 30,000 was the highest count reached. The premyelocytic forms reached 35 per cent. That was a case of very acute miliary tuberculosis. It was diagnosed leukemia previous to the autopsy. The question as to whether we are dealing here with a leukemia seems to me should hinge upon the pathologic findings at autopsy. We don't know a great deal about leukemia at best. In leukemia one gets metastatic foci of abnormal cells such as these, while in an acute infectious process these metastatic collections do not occur, and they did not occur in the case which I reported. I saw the sections of the skin from this case which showed beautifully almost tumor-like formations within the skin itself.

DR. ELLIOTT: (Closing the discussion) In regard to the case which Dr. Newburgh reported, it seems to me that the case could very well be a leukemia cutis of the face and leukemia of the body, the latter consisting of diffuse hemorrhage into the skin. The differential count is particularly interesting. However, in practically all of the cases described there has been a marked increase of the lymphocytes and it has been distinctly lymphatic leukemia. Dr. Marshall's case may well have been leukemia cutis inasmuch as the lesions themselves are not pathognomonic. The lesions differ so that it is impossible to make a diagnosis from the character of the lesions. Arndt in his discussion of leukemia cutis classifies it under three different groups, aleukemic, with no increase of cells; sub-leukemic, with slight increase of cells; and leukemic, with decided increase of cells. All the lesions show the typical infiltrates into the skin.

A REPORT OF A CASE OF HYDROPHOBIA.

HAROLD DEB. BARSS, M.D.

(From the Surgical Clinic, University Hospital, Ann Arbor, Michigan.)

The case which I shall report tonight is the second of two cases of rabies which have been cared for in the Surgical Clinic of this Hospital in the last fifteen months. I chose this case because of the extreme rarity of the disease in these days, and because the manifestations were so uniformly typical of the malady as recorded by all writers on the topic. It is interesting that of six men whose works I have lately read, three frankly stated that they had not seen a case themselves and were merely transmitting data derived from others. The other three neglected to state whether or not they had seen a case. It has been our good fortune (good from a scientific view only) to have witnessed two undoubted cases of hydrophobia. The first case was treated here on August 23, 1916, and I believe has been or will be carefully and comprehensively reported in the literature by Dr. Herbert W. Emerson who is in charge of the Pasteur Institute, and I shall not refer to it. The other is the subject of this paper.

It is not my intention to tire you with an exhaustive treatise on the subject. For this meeting I merely want to review briefly the outstanding features of the disease as recorded by most authors, and then compare these with the actual signs and symptoms as manifested in this case.

Rabies is an acute contagious disease produced by inoculation of a wound with a specific virus contained in the saliva of a rabid animal, usually transmitted by a bite. The exact nature of the infecting agent is not certainly known, but that it is some form of microorganism there can be no doubt. After inoculation, the virus is conveyed to the central nervous system by means of the peripheral nerves from the wounded part. Whether the toxins alone or the infective agent itself is thus transmitted is still unknown. After reaching the cord, the virus travels to the medulla, cerebellum and cerebrum; thence also along the spinal and cranial nerves and in this way reaches the salivary glands, especially the sublingual and submaxillary, and so renders the saliva highly infectious.

The period of incubation varies widely. The shortest period has been twelve days; the longest is not definitely known—several months

to a year. The average is forty days. Incubation is shortest following bites of the face and wolf bites. The wounds are frequently insignificant, heal promptly and are forgotten.

Hydrophobia does not follow in every case bitten by a rabid animal. Roux, Babes and others estimate that only about 14 per cent. of persons bitten by a rabid animal develop the disease. The mortality has been considerably reduced since the development of the Pasteur treatment. The report of the Parisian Pasteur Institute shows that since its foundation there has been a mortality of 0.5 per cent. This treatment shows one twenty-fifth of the mortality which attends all other preventive methods.

In hydrophobia death is almost inevitable. Practically all cases in which it is alleged that recovery ensued were not true rabies but hysteria. An exception must be made in Murri's case. So far as I have learned Murri of Bologna cured the only case of true rabies which has recovered. This he did by injecting emulsions of cords of rabbits dead six, five, four and three days respectively.

In brief, the symptoms as recorded by most writers correspond almost exactly and are divided into three stages:

1. The prodromal period, during which the healed wound may itch or tingle, with sometimes neuralgic pains. Frequently there are no abnormal symptoms in the old scar. The patient complains of malaise, nausea, headache. Mental depression is the rule. There are sometimes chilly sensations, stiffness in the neck and slight respiratory difficulty due to incipient spasm of the diaphragm.

2. Period of excitement, characterized by increased anxiety; dysphagia because of pharyngeal spasms; intense hyperaesthesia of the skin and all the special senses. Noises and drafts of air provoke sudden dyspnea and convulsions. The pupils are fixed and dilated. There are marked anginal attacks in these periods of apnea. Delirium is absent at first but may develop later. The seizures become more frequent. Salivation is marked. The patient is unable to swallow and so the thick tenaceous saliva drops away or the patient spits violently. Gradually the suffocative paroxysms which had been induced by external stimuli seem to come on spontaneously and the patient throws himself about and must be restrained.

3. The paralytic stage in which the patient sinks into a profound exhaustion. The pulse becomes rapid and weak, death resulting usually in coma with paralysis.

The entire course of the disease may be run in sixteen hours or may last four to five days, seldom longer.

The treatment must be prophylactic. Wide excision, or amputation of small parts, followed by the actual cautery, caustics, or germicides, preferably bichloride of mercury. If there has been a delay of some hours or days, the cautery is useless and may delude the patient into a sense of security. The treatment par excellence and the most rational is the Pasteur treatment, on which I will not touch in the present paper.

If the disease has developed, the only treatment now known is to relieve the seizures with morphine, hyoscine, chloral, or chloroform and give rectal water to alleviate the intense thirst. Curara has been tried because of its action in paralyzing the nerves supplying striped muscle, thereby controlling the convulsions. One cure through its use has been reported but it is doubtful if it was a true case of hydrophobia. It was tried in our previous case with little or no effect, save to control the convulsions. Antirabic serum is also given but save for the one known case has been of no avail.

Compare this textbook picture of the disease, with our case.

D. W. a school boy of 13, entered the Surgical Clinic of the University Hospital October 1, 1917, at noon, with the following history: About the middle of last July he was bitten while trying to separate two dogs which were fighting. One dog was his pet, the other was strange. It was the strange dog which did the biting and so far as could be determined it was accidentally done. No one knows what became of the dog. The forefinger of the right hand was lacerated so that one stitch was taken and some powder dusted on. The wound healed promptly and nothing further was thought of it till September 29, when the boy felt an occasional momentary twitching pain in the bitten finger, slight nausea and a rather severe headache. The next day, September 30, the patient exhibited occasional attacks of dyspnea, some difficulty in swallowing, and a hypersensitiveness to cold drafts. On October 1 the difficulty in swallowing became more pronounced and the child was brought to the Hospital.

On entrance the patient appeared pale, eyes prominent and glaring. The facial muscles were very active producing frequent scowls, pouting of the lips, etc. The gait was somewhat stiff and spastic. When seated the boy sat huddled with his chin on the chest and the collar of his Mackinaw was pulled high around his

head because, he said, the draft hurt him. The patient walked to his room and undressed himself. He said he felt well but couldn't swallow easily. Attempts to swallow seemed to interfere with breathing. He didn't see any need for going to bed but was willing. There were frequent exaggerated attempts at laughing and a sort of explosive method of talking, hurrying as though trying to get out an idea before one of the respiratory spasms should interrupt. He asked that the window be closed because the "air currents" worried him. His temperature was 102.6 deg., pulse 164, respiration 48. Antirabic serum was administered.

The patient remained about the same till 2 p. m. The only complaint was an increasing difficulty in swallowing. He could take only a teaspoonful of liquid at a time. The boy would take the spoon very carefully and slowly, would fill it and slowly approach his mouth and then suddenly throw the contents in, in an attempt to get it in and swallowed before the spasm. Each such attempt would excite an attack.

At 3 p. m. occurred the first general convulsion, which lasted about thirty seconds. The boy suddenly sat upright in bed and then threw himself back violently, clutched at his heart and begged the nurse to rub it hard. He called loudly for his mother, and from that moment he seemed to have an uncanny presentiment of impending death. From three o'clock on he kept calling for his mother, begging all the attendants to get her; shouting out at the top of his voice, declaring that if she didn't come soon, she wouldn't see her boy alive. "Tomorrow will be too late. If she doesn't come soon I'll be a stiff corpse when she does come." The convulsive seizures, tonic rather than clonic, succeeded at more frequent intervals. The neurologic examination at 3 p. m. by Dr. Camp showed the following. "The patient replies promptly to questions, seems excited. Occasional grimaces about the mouth accompany talking. No memory disturbance. Pupils dilated and fixed to light and accommodation. No palsies, heart rapid. Peripheral hyperaesthesia."

Restraining sheets had to be applied at 3:20 p. m. The patient then became very restless, throwing himself around the bed. The convulsive attacks became more frequent and of longer duration. During the seizures in which the most prominent symptom was sudden spasm of the diaphragm with apnea, the patient cried out with pain over the heart and in terror begged the nurse to rub it, and called wildly for

his parents. His mentality was perfectly clear between attacks. He pleaded to have the restraining bands loosened. "I am such a little boy. Won't you get my mother? Don't you want to please me? Well, go to it then, get her, because if you don't, she'll never see her boy alive."

At 4:30 p. m. antirabic serum was again administered, followed by one-quarter grain of morphine sulphate hypodermatically. The spasms occurred still more frequently, the longest interval being seven minutes, the shortest, one minute. At the first hint of an approaching attack the boy would spring up to a sitting posture then throw himself back violently, the face contorted with frightful grimaces. The boy could no longer swallow and would spit forcibly. Any attempt to give liquids by mouth, or any sudden noise, would throw the lad into a spasm.

At 6:30 p. m. the second dose of morphine sulphate, grain one-quarter was given but was not effective. There was incontinence of urine. The bowels did not move. At 7:40 about forty grains of chloral was given per rectum; the exact amount could not be estimated as some of it was immediately expelled. The Murphy drip was started, but the water was not retained and that method was discontinued. The patient was still very excited and noisy till about nine o'clock when in an exhausted state the boy began to lie more quietly. A radial pulse could not be obtained, respiration was very irregular and shallow. There were only occasional convulsions during which the patient would strike out and claw at objects or persons near him. Now rational only at times. A reddish brown thick tenacious mucus dripped from his mouth and there were no longer attempts to spit.

At ten o'clock the patient became unconscious, the limbs rigid, the breathing stertorous, at times almost vocalized in a peculiar crowing sound. The rectal temperature at 11 p. m. was 107.8 deg. This comatose state continued till respirations ceased at 12:30.

It seems strange and most unfortunate that within the last fifteen months two patients both living within fifty miles of Ann Arbor should develop this most rare and terribly fatal disease. It seems hardly possible that the need of prophylactic measures in any suspected dog bite is still unknown by many persons. Had these cases occurred in the Upper Peninsula in some out of the way place where a doctor is not readily accessible we might excuse it. But when

it occurs so close to this institution in a community where well informed men are practicing, something must be lacking.

The public is becoming educated to the dangers of tuberculosis and is becoming versed in the knowledge of the proper methods of prevention and cure of that disease. Tuberculosis clinics have been held frequently, and censuses. Literature is spread broadcast and the press has aided remarkably in helping on this work.

It would seem that some more radical methods must be taken to get to the public mind the knowledge of the dangers of dog bites, and the measures necessary to avoid an occurrence of the disease. I believe that our doctors must be more alert to the possibilities of this infection, and the urgent measures that should be adopted to avoid it. The physician must keep ever fresh in mind the picture of the disease that he may more quickly diagnose the condition. I believe that the people should learn through wider notices in the press and through literature, the location in this city of a Pasteur Institute, what it is and how it may be used.

And more than this, there should be more stringent laws governing the keeping and care of dogs. In this regard, England has more stringent laws than any other country and rabies is an unknown disease there. Rare though it is here, it is all too frequent a visitor. Perhaps the dissemination of this knowledge is being conducted as widely as possible; but one who has seen the awfulness of the disease cannot help but hope that the time will soon come when there will be no more rabies.

For this state, I would make one other suggestion. The cost of such a course of treatment is almost prohibitive. It must be true that many persons have to take their chances, and run the risk of infection, because they cannot afford to take the treatment. There is in this city a Pasteur Institute where treatments are given for all suspected cases; but even at this Institute, the state requires that for all persons so treated, there shall be a deposit of twenty-five dollars (\$25.00). One can readily see that for many persons even this price is absolutely prohibitive. The persons affected are not responsible for getting bitten, and they are not responsible for the laws which allow dogs to run free. It seems unjust that they should be required either to pay the twenty-five dollar tax, or else run the risk of infection. In my opinion, this treatment should be provided to citizens of the state, free from all tax, and

I earnestly place this suggestion for your consideration.

DISCUSSION.

DR. HERBERT W. EMERSON: There are only a few things which I wish to add, and they are to emphasize some of the lessons from these two cases. We have learned from experience to pay no attention to the history in cases of dog bites, as to whether the dog had rabies or not. Patients will come to you for treatment of bites and perhaps tell you that the dog was all right. We must not accept such statements without finding out the facts in the case. In this last case the patient reported to a physician and said that the dog was all right.

Secondly, in dog bites, one should resort to thorough cauterization with fuming nitric acid. Next to that, is the treatment of the wound with formaldehyde. The treatment of the patient after he develops symptoms of hydrophobia is chiefly palliative. There are three or four different treatments that have been recommended. I might call attention to the quinine treatment developed by Dr. Moon of Kansas City (*Journal of Infectious Diseases* XIII, 165) and used by Dr. Harris of St. Louis (*Journal A. M. A.* 1913, p. 1511) who reports a cure. This was probably a case of mistaken diagnosis. This treatment has been checked up in a number of laboratories and in our laboratory here by Dr. Cumming. It causes no delay in the development of the symptoms or in the death following in inoculated animals. It was checked up by Dr. F. S. Fielder of New York. One of his three cases yielded to the treatment but this was afterwards diagnosed as a case of hysteria.

Quinine and urea hydrochloride is given intravenously and intraspinally five to ten grains every few hours. Given intraspinally this is a dangerous method. In one case it was followed by an alarming collapse which lasted two hours. It had no apparent effect on the symptoms of the disease which proceeded three convulsions and paralysis to death.

The second treatment is the use of phenol in one or two per cent. solution given subcutaneously. This was first used about 1913 by Haberlin and one case of cure was reported which probably was a case of mistaken diagnosis because all cases since have shown no beneficial result of the treatment.

I have been more interested in the study of the treatment of this disease since I have seen these two cases, in the attempt to guide me in the treatment of the next patient should I be unfortunate enough to have one.

Hydrophobia is a protozoan infection, and inasmuch as a number of protozoan infections lend themselves to treatment, one might hope to find some substance which might offer some assurance of cure, but such has not been the experience of others.

DR. IRA D. LOREE: I would like to ask Dr. Emerson what disposition should be made of the animal and patient after the wound has been cauterized soon after its infliction, with fuming nitric acid.

DR. HERBERT W. EMERSON: Have the animal locked up securely, for a dog suffering with rabies will get away where an ordinary dog will not. If the dog is all right at the end of ten days, don't worry. If the dog dies, the head should be sent to

the Pasteur Institute and the patient should be sent to the Pasteur Institute. In any case in which you cannot get access to the dog, the dangers of the condition should be emphasized to the patient and if he wants to gamble with his life, he should be discouraged from doing so. In most cases, the patient or the parents of the patient have not realized that if the condition goes on until symptoms develop there is nothing that can be done.

DR. JAMES G. VANZALUWENBURG: Personally, it seems to me rather futile to ask for more stringent laws because after all, a stringent law is bound to be a dead letter unless it is backed up by public opinion and public opinion is the feature which I think should be emphasized in this matter.

DR. BARSS: (Closing the discussion) I haven't much to add except in regard to the legal aspect. Rabies is practically unknown in England and Australia, due to legislation. Literature says that rabies is unfortunately all too common in America and we are lax in our legislation regarding dogs. I beg for a wider distribution of the knowledge regarding rabies. Often we doctors don't know what to do if we get a case of dog bite. We don't know how much security to take in immediate cauterization. We are coming to know about abortive treatment of tuberculosis and venereal diseases. We should know more about rabies. If you should talk with most of the doctors or lay people, they are absolutely helpless in knowing what to do in case of dog bite, or if they know that the dog was rabid, they don't know about Pasteur Institutes. If we have more widespread literature on the subject the laws are sure to come.

A CASE OF TYPHOID FEVER RECEIVING INTRAVENOUS INJECTION OF FOREIGN PROTEIN.

JOHN B. GRANT, M.D.

(From the Clinic of Internal Medicine, University Hospital, Ann Arbor, Michigan.)

I desire to report a crisis occurring in typhoid fever concurrent with the administration of foreign protein in the form of diphtheria antitoxin.

The patient, H. C., age 19, entered this Clinic the 20th of October, which was the fifth day of her illness, with the usual history of the onset of the disease. She presented a positive Widal test and blood culture. The course of the illness showed no complications except the marked tympanites of a severe case. The patient's temperature curve in the second week remained persistently above 104 deg. F. with a pulse between 100 and 110 and a white count averaging 3000. On the morning of the nineteenth day of the illness she complained of a sore throat. On examination this showed a membrane which gave a positive culture. At noon of the same day the temperature was 106.2 deg. F. and the leucocyte count was 5200. At 2 p.m. the temperature was 103 deg. At 2:15 p.m.

10,000 units of antitoxin was given intramuscularly, followed at 2:45 by 10,000 units intravenously. The sole manifestation of this was a chill beginning one-half hour after the intravenous injection and lasting forty-five minutes, accompanied by a slight delirium. The temperature began to fall immediately after the injection and had reached 99.1 deg. F. at 3 a. m. the next morning. Leucocyte counts made during this period showed a maximum of 6,000, two hours after the antitoxin was given. In ten hours it had fallen to 2,300, which has been constant since.

The intravenous injection of the antitoxin introduced a considerable amount of foreign protein into this patient's circulation. A number of observers have recently investigated the therapeutic value of the intravenous introduction of protein in typhoid fever. Various types of treatment have been followed out with specific and nonspecific protein. Also some investigators have used nonprotein substances.

Between 1913-1915 there were about 550 cases of intravenous injection of typhoid vaccine in the treatment of typhoid fever. McWilliam's (1) draws the following conclusions in regard to these cases:

1. Fifty per cent. of the disease was cut short one to several weeks.
2. A few deaths occurred where complications had already set in, especially hemorrhages.
3. No one type of specific vaccine is of especial importance.
4. Best dosage was 150 to 250 million.
5. The injection calls forth:
First a leukopenia, later a leucocytosis with a slight increase in the eosinophiles.

Of the above results, the most important contributions were made by Ichikawa (2) and Kraus (3) who obtained termination by crisis in 20 per cent. of their cases.

Paulicek's (4) conclusions are of a special value because none of his sixty-eight cases came under observation until they were two weeks old and his mortality was 34 per cent., although the mortality in his control was even higher. He shows that to be of benefit the injections should be given in the first two weeks, for Lowry with Luksch and Wilhelm receiving their cases from the same trenches, only earlier in the course of the disease, had a mortality of only 11 per cent. Secondly, injections should not be given in complications of the circulatory system.

All these reactions, however, were due to the injection of specific typhoid organisms. Ichikawa and Kraus early determined that the reaction was not specific. The former used typhoid vaccine with equally good results in paratyphoid fever and Kraus obtained similar results in typhoid fever with colon vaccine. Lüdke (5) confirmed Kraus's results in eleven of a series of twenty-two cases by using colon vaccine. In ten others he used 4 per cent. deuter-albumose. In five of these he obtained a crisis followed by immediate convalescence. There were no fatalities. Lüdke found that as a rule in one-half to one hour after the injection there appeared a more or less heavy chill which lasted from one-half to three-quarters of an hour, followed by a rapid rise in temperature of one and one-half to three and one-half degrees F., which in forty-eight hours fell by crisis to normal. In some cases the temperature fell seven degrees F. in six hours. This period was accompanied by a drenching sweat; but in no case was there a detectable weakening in the pulse nor was there any untoward reaction. In contradistinction to the use of specific vaccine, there was never a leucocytosis. He concluded that the explanation was the same as a crisis of pneumonia.

Mittlander, (6) in his opinion, obtained improvement in some hundred cases by using intravenous injection of 1 cc. of 20 per cent. caffeine and 10 per cent. camphor followed by a saline solution, thus giving slight evidence that any agent not necessarily protein, which excited a chill, may bring about a sudden immunity to infection.

Janeway (7) in the Congress of American Surgeons and Physicians, refers to a termination by lysis of typhoid in a patient who had a chill following transfusion for hemorrhage.

Coming now to the explanation of the phenomenon of a crisis occurring after an intravenous injection of foreign protein in typhoid, we are flooded by a multiplicity of theories which leave us no better off than before. Gay and Claypole, (8) Gay and Chickering, (9) Jobling and Peterson, (10) Teague and McWilliams (11) are perhaps the ones who have attempted to investigate the mechanism most thoroughly. Teague and McWilliams have summarized the work of the others in a recent issue of the *Journal of Immunology*.

However, before giving their summary it would be of interest to touch briefly on some of the work they have been doing on the bacteriolytic power of normal human sera. Teague

and McWilliams found that one cc. of the sera of twenty-four non-typhoid patients would kill from one to one hundred million typhoid bacilli. In a series of forty-four typhoid patients, thirty showed the same bacteriolytic power. From this they conclude that typhoid fever cannot be a septicemia.

The same authors summarize three different views regarding the pathogenesis of typhoid fever:

1. It is a blood disease, a typhoid septicemia.
2. It is a primary infection of the intestinal follicles. The mesenteric lymph glands are next infected and finally the typhoid bacilli break through into the blood where they multiply, producing a secondary septicemia.
3. In typhoid fever the bacillus first finds its way from the alimentary tract to the lymphopoietic system including the spleen and from it, it invades the blood stream. The presence of the bacilli in the blood represents merely an overflow from the lymph organs.

In view of their experiments, Teague and McWilliams rule out the first phase of a primary septicemia as unobtainable. Furthermore, since the serum of typhoid fever patients is only exceptionally of low bactericidal power, the view that the disease is a septicemia following the infection of the intestinal follicles and mesenteric glands must be discarded. *Ipso facto* there remains only a third hypothesis.

Having thus claimed to have arrived at a definite conception of the pathogenesis of typhoid fever the authors next proceed to outline the various existent theories of the mechanism of the cure of typhoid by the intravenous injection of protein. We shall not attempt to discuss them but leave them with you to consider:

1. Hyperleucocytosis which is chiefly upheld by Gay. (8)
2. Paralysis of the heat center suggested by Paltauf. (12).
3. A rapid mobilization of antibodies advanced by Bull. (13).
4. Setting free of nonspecific ferments, as suggested by Jobling and Peterson (10) in their theory that the cure is affected by the increase of the protease and lipase, the former producing a more rapid splitting of the toxic protein fragments to lower nontoxic forms, while the increase in the lipo-

lytic ferments may have some influence in the destroying of the typhoid protein.

5. That fever is due to repeated anaphylactic reactions, due to the patient becoming sensitized to the proteins of the infecting microorganisms and as the latter enter the circulation, repeated low-grade anaphylactic attacks occur without producing complete antianaphylaxis. The sudden introduction of a large amount of antigen under these circumstances might completely desensitize the patient.
6. The theory of the authors themselves that typhoid fever is a local disease and that as the blood serum is strongly bacteriolytic, the intravenous injection of vaccine causes a more active passage of bacteriolytic substances from the blood capillaries into the "local lesions" with a destruction of the typhoid bacilli.

We present these views for your consideration without drawing any conclusions from them.

We would draw your attention to the fact that we are entering upon a new field in the therapeutics of infectious diseases.

REFERENCES.

1. McWilliams: *N. Y. Med. Record*, 1915, p. 649.
2. Ichikawa: *Zeitschr. f. Immunitatsforsch.*, 1914, p. 23-32.
3. Kraus: *Wien Klin. Wochenschrift*, 1915, p. 29.
4. Pauliak: *Wien Klin. Wochenschrift*, 1915, p. 759.
5. Ludke: *München Med. Wochenschrift*, 1915, p. 321.
6. Mittlender: *J. A. M. A.*, 1916, p. 1320.
7. Janeway: *Jr. Cong. Am. Physicians & Surgeons*, 1916, p. 42.
8. Gay and Claypole: *Arch. Int. Med.*, 1914, p. 632.
9. Gay and Chickering: *Arch. Int. Med.*, 1916, p. 326.
10. Jobling and Peterson: *J. A. M. A.*, 1916, p. 1753.
11. Teague and McWilliams: *Jr. Immunology*, 1917, p. 193.
12. Paltauf: *Wien Klin. Wochenschrift*, 1915, p. 631.
13. Bull: *Jr. Exper. Med.*, 1916, p. 428.

DISCUSSION.

DR. L. HARRY NEWBURGH: There can be no doubt in your minds that we have approached an exceedingly difficult subject. There are, however, certain general conclusions which I think can be drawn. In the first place, we are at the beginning of what appears to be an exceedingly important method for the treatment of infection. Although the statistics are still confused, there seems to be no question

that the injection of protein into the circulation does in a general way affect favorably all sorts of infections. For instance, we know of the innumerable reports of improvement in various infections following the injection first of specific vaccines and then later of mixed vaccines. Those cases always did better when the vaccine was injected intravenously. There are reports of a large number of typhoid cases in which there was a very general decrease in the mortality and in the duration of the disease. About 30 per cent. of those cases had a crisis with rapid convalescence. I think we can also feel assured that this method is not a specific therapy. The earlier observers thought that they were working with vaccination. However, the injection of any protein into the circulation will produce the phenomenon which Dr. Grant has reported. In this latter instance globulin injected into a girl with typhoid fever causing a striking reaction, the temperature going from 108 deg. to normal in twelve hours.

There has been a great deal of discussion as to whether the improvement was produced by the leucocytes. In fact, the earlier workers had in mind the production of leucocytosis. Ludke has shown that one gets the same reaction in the absence of leucocytosis and we have here such a striking example. Of course, workers in this field have done what is human. They have obtained some results and have tried to explain them with a rational theory. Any hypothesis is neither good nor bad at the present. None of the explanations is complete. They are all confused, and for the present it is better to admit that we do not understand the mechanism. We should simply realize that this is an important new therapeutic procedure for all infections.

DR. PAUL DEKRUIF: It seems to me that my talking in a clinical society is rather out of place. The thing which impresses me most about the literature which Dr. Grant reports is the total lack of experimental work on this subject. All kinds of opportunity presents themselves to settle this question in a rational manner with experimental infections in animals, and that apparently has not been done at all. Besides the treatment of typhoid, remarkable results have been obtained in rheumatism by Miller of Chicago who used phylacogens, etc. Very recently Kraus from Argentina has used a normal beef serum in the treatment of anthrax with remarkable results. It seems to me that in all this work with non specific proteins there has been a lamentable lack of control work in the first place and in the next place, a lamentable lack of work with animals. I have no doubt at all that there was something more in this case than the effect of diphtheria. At the same time it seems to me that before this thing is applied in a wide-spread manner to therapeutics, there should be some decent experimentation upon it. Dr. Novy, whom I consulted about this question before I came, thinks that there might be one explanation made. I must confess that I have absolutely no explanation because the experimental work is so meagre that one cannot make one. Dr. Novy believes that there may be here a condition of immunity in these infections which is masked by certain blood colloids, and when you inject a substance to produce a chill, the substance may remove the masking substance and in that way liberate

the immune bodies, which will control or abort the infection. And we had intended, if I had not been called away, to approach this subject in relapsing fever which is a particularly advantageous disease to use in animals because animals may get a third or fourth attack. At the same time you may show immune substances in the animals while the animals are suffering. We had intended to inject into such animals certain complex substances such as sugar, starch, kaolin, etc., and then see if there would be a decrease in the organism. For instance, joint infections in rabbits produced by streptococcus would offer a very good field for experimental approach to this question. All the six theories which Dr. Grant has mentioned should not be given the dignity of theories because there is so little to back them. I must say that of all the clinical work that has been done on the question, that of Gay is by far the most careful; but of course, he used specially treated typhoid organisms. It seems to me that you would be very fortunate if you were to get a nice typhoid epidemic of thirty or forty cases and go carefully about the thing and then be fortunate enough not to have a simultaneous occurrence of diphtheria. Then use straight serum globulin or normal serum and not diphtheria antitoxin, because in biologic questions it is desirable to use as little complicated materials as possible.

DR. QUINTER O. GILBERT: Dr. Grant said he didn't have a leucocytosis in this case. Technically he did have such. The patient had previously 2,000 white blood cells which went up to 6,000.

DR. HAROLD DEB. BARSS: It might be interesting to state that last year we were treating a case of chronic actinomycosis of the abdominal wall in the Surgical Clinic in which the patient was running a temperature of 101 to 101.5 degrees. We injected Coley's mixed toxins intravenously and the patient developed a chill, temperature of 107 degrees, and became delirious. The next morning the patient's temperature was subnormal. His condition then improved remarkably and he left the Hospital, not entirely cured, however. The incident bears out the same finding of a foreign protein injected in a case of chronic infection.

DR. GRANT: I only wish to draw attention to the fact that in the literature where specific white counts have been made after injection of nonprotein vaccine, there has been no marked leucocytosis, as there has been after the injection of specific vaccines.

REVIEW OF A MONTH'S RADIOGRAMS.

JAMES G. VAN ZWALUWENBURG, M.D.

(From the Clinic of Roentgenology, University Hospital, Ann Arbor, Michigan.)

The series exhibited comprise reproductions from 32 cases of general interest. In connection with a case of multiple dactylitis, the following observations may be made:

This is an example of a condition which we see comparatively rarely here but is quite common in some other clinics. It is one of multiple

dactylitis and the question is raised whether it is syphilitic or tuberculous.

I have seen so few examples of this condition that I am frank to confess that I am not well posted. I have already given the opinion that I thought it luetic. On reviewing the literature hastily, we incline to the opinion that it is tuberculous. As a matter of fact the literature is quite unsatisfactory, there being contradictions not only in the text but also in the examples reproduced. We gather that lues in its earlier stages is an almost purely periosteal process and the shaft of the long bones is always seen as a distinct sequestrum, while tuberculosis rapidly leads to a destruction of the sequestrum and the shaft disappears completely, as it is here shown. However, the same thing occurs in lues. I venture the suspicion that the determining factor in the production of this picture may be a secondary infection of the sequestrum by pus organisms, which is a common occurrence in either. Perhaps it would be safer to say that the differentiation can not be made with certainty.

In connection with a series of radiograms of the chest the following observations may be made:

I am showing this slide to introduce the subject of the significance of the bronchovascular tree.

The system of markings that we have called the "bronchovascular tree" is a striking feature of every good chest radiogram and has occupied the attention of every one that has done any amount of chest work. It has been the basis of a great amount of speculation and theorizing. A few years ago there was a very sharp controversy in America and in Europe as to the exact anatomic basis for these shadows, resulting in considerable experimental work on excised lungs. Perhaps the most extensive work was done in the Phipp's Institute by Dunham, Boardman, and Wolman. As a result of their observations the conclusion is reached that these shadows represent at least three components, viz., the bronchial tissues themselves, the peribronchial tissue including the lymphatics, and the blood vessels and their contents.

Some of us now would like to go one step farther. Obviously it is conceivable and even likely that different pathologic processes react differently on these three components and it would be to our advantage if we could distinguish which was the most affected, whether the vascular tree, or the bronchial tree, or the lymphvascular system. Some evidence bearing

on this problem has been accumulating for some time.

For instance, by means of the stereoscope it may be seen that in many cases these shadows have anastomoses in the periphery of the lung. Now, obviously, such shadows can not be bronchial in origin for the bronchi do not anastomose, they must be vascular, and probably venous at that, for the venous anastomoses are much more free and in the larger trunks than the arterial. Such a picture we have termed the reticulated type of B-V tree.

On the other hand, we sometimes see the tree dividing regularly into two branches, dichotomously. This occurs especially in long-standing cases of asthma where we know that pathologic changes in the bronchi are common and the inference is that these more nearly represent these anatomic structures. This type we have named the articulated type of B-V tree.

Sometimes we see a system of lines and markings that can not be classified in either of these types, they are irregular and disorganized; apparently replace the normal lung architecture, usually in an apex, and usually in the tuberculous. Dunham thinks these represent tuberculous infiltrations in the lymphatic system, at least in large part. Of course, when we consider the occlusion of lymphatics and subsequent diversion of the stream and its metastases, it is easy to understand its disorganization and irregularity.

Another factor that enters the problem is the blood in the capillaries of the lung. This represents a very considerable mass; as much as one-fifth or even one-third of the entire blood mass of the body may find lodgment in the lungs, it is alleged. This will naturally throw a deeper shadow over that portion of the chest where the lung is the thickest, namely, near the bases. Accordingly we find individuals that are relatively dense below, the density increasing progressively from above downwards. Ordinarily, the healthy chest is fairly evenly illuminated. This is particularly true of cases that have circulatory difficulties, and the roentgenologist knows to his regret that "heart cases" are notoriously "thick" and difficult subjects.

This first slide presents a case with a substernal goitre, with a large heart and an enormous dilatation of the bronchovascular tree. Unfortunately, it is virtually impossible to reproduce the finer markings of the lung texture on the lantern slide, and the anastomotic nature of the shadows can be demonstrated only by

means of the stereoscope. Judging from the size of the heart, we conclude that these are vascular in origin, but it is not at all clear that they are exclusively of that nature.

The next is an example of a frank cardiac case with enlarged bronchovascular tree below and a gradual increase in general density from above downwards. We interpret this as demonstrating a dilatation both of the large vessels and of the capillaries of the lung.

The next is a similar case. The plate is rather "thin" in quality because of an unexpected thickness that did not appear on the surface (capillary congestion), and the plate was underexposed.

Here is another cardiac case of a slightly different type. Not only is the B-V tree enlarged in the lower portion of the thorax but in the upper lobes as well.

We have additional information coming from cases not primarily cardiac, but inflammatory. For instance, last year I saw a nurse with a pain in the side. The only radiographic findings were an increase in the finer branches of the bronchovascular tree in the axillary region near the pleural border, probably about one inch beneath the parietal pleura. I reported at that time that presumably she had some sort of infection leading to a congestion at this point and that she might develop a pneumonia. Two days later she had developed a pleural effusion which I was able to follow radiographically until it disappeared. After her recovery I made another set of plates demonstrating that the appearance seen at the first observation had disappeared. I think, therefore, that I am justified in assuming that this represented a local hyperemia, and was an expression of a local inflammation.

Recently I have seen a somewhat similar case.

The next slide reproduces the radiogram of a little girl with acute attacks of dyspnea and coughing, whose side is fixed, the diaphragm moves little if any, the resonance is normal, all breath sounds are distant, no whispered voice, no fremitus, no expiratory murmur. Radiographically, we find this portion of the chest has about the same density as the other, but is almost free from shadow representing the B-V tree, as is easily seen by comparison with the opposite side. (We can not compare the lower portions of the thorax in this way because the cardiac movements serve to erase these markings in the left lower.) We are inclined to confirm the clinical diagnosis of bronchial

obstruction. But that does not explain this asymmetry of the B-V tree. The other features are easily explained; the heart drawn over to the diseased side by the relative atelectasis, the fixation of the left diaphragm, without thickening of the pleural shadow or reduction of the width of the interspaces. I can see no other explanation than that there has been a change in the circulation of that lung, and the difference in the development of the B-V tree is a measure of the reduction of the blood content of the pulmonary vessels.

This last slide represents the conditions in chronic asthma. Here the B-V tree is distinctly of the articulated type.

These are shown here as examples of the differentiations we are trying to make in the study of our chest cases. I believe this is a more promising field than any other in radiography at the present time.

DISCUSSION.

DR. JOSEPH A. ELLIOTT: (Discussing the dactylitis case) I was of the opinion that this was syphilitic rather than tuberculous. It seems to me that if this were tuberculosis, we would have involvement of the joints. A tuberculous process which would be inflammatory should show changes in the joints. It may be due to the fact that this child is so young that we get so much destruction of the bone. Text-books say that tuberculosis destroys bones and syphilis does not, but due to the age of the patient, I am of opinion that we might well have such extensive bone destruction as there is here due to syphilis.

DR. CYRENUS G. DARLING: I have seen two or three cases similar to this one. I recall one case of a child which came to the Clinic ten years ago with an empyema. This was taken care of and drained for some time, and then afterwards developed a dactylitis I believe on the little finger of one hand, and I think that both hands were involved, one finger on each hand. This case was treated in the

Medical Clinic and I think the diagnosis of tuberculosis was made. This child was under observation for four years and the two diseased fingers were very much shortened but never developed into an open sore. I cannot describe the condition of the bone because they were not X-rayed. I was under the impression that this was tuberculosis and I think it was so stated, the child being less than two years old at the time the condition developed. I think I have seen only two other cases in this Clinic besides the one I have mentioned, and those were both young children.

DR. VAN ZWALUWENBURG: (closing the discussion) It seems to be distinctly "up to the radiographer" to justify himself in a great deal of this chest work and the problem is by no means simple. If you will read Osler you will find that he says, "more than any others, radiographers need the salutary lessons of the dead house to correct their visionary interpretations of shadows, particularly of those radiating from the roots of the lungs." In all humility, however, I must differ with Osler. I see no certain way in which the dead house is going to solve our problems, because they are to a large extent problems in the actual circulation in the living lung, and when the individual dies, the circulation stops and the distribution of the blood is entirely changed.

I have tried to approach the question by means of Valsalva and the Mueller experiment with questionable results. I think of trying to solve the problem with animal experimentation. Perhaps I can persuade a surgeon to help me with a dog, and actually ligate certain vessels and see what happens. That would give us experimental evidence.

The time is past when the radiographer can look to his plates for empirical signs which shall tell him all that he cares to know, or can by *a priori* reasoning reach a satisfactory explanation of the things he sees. We have reached the stage where we must analyze all of the evidence we find on all of our plates, determining the morbid anatomy and finally try to interpret them in terms of disease processes. If it were not for the excuse that our branch is young we should appear ridiculous, and that excuse will not serve much longer.

Eskay's Neuro Phosphates.—The Council on Pharmacy and Chemistry reports that Eskay's Neuro Phosphates (Smith, Kline and French Co., Philadelphia) is claimed to contain alcohol 17 per cent. and sodium glycerophosphate 2 grains, calcium glycerophosphate 2 grains, strychnine glycerophosphate 1/64 grain, in each dessertspoonful. It is called a "Nerve Tissue Reconstructive" and the advertising claims are based on the discredited theory that certain disorders are due to a deficiency of phosphorus in the nerve structures of the body, and that glycerophosphates are assimilated more readily than ordinary phosphates. The Council held Eskay's Neuro Phosphates ineligible for New and Nonofficial Remedies because of the unwarranted therapeutic claims

made for it, because the combination is irrational and because the name is not descriptive of its composition. (*Jour. A.M.A.*, Sept. 29, 1917, p. 1102).

Some Misbranded Nostrums.—The following "patent medicines" have been declared misbranded under the U. S. Food and Drugs Act: Sherman's Compound Prickly Ash Bitters, containing 20 per cent. alcohol, buchu and an emodin bearing drug. "Thorn's Compound Extract of Copaiba and Sarsaparilla," a mixture of copaiba and sarsaparilla extract. "Tarrant's Compound Extract of Cubebs and Copaiba," a mixture of copaiba and cubebs extract. V. I. G., an aqueous solution of glycerin, morphin, berberin, hydrastin and salicylic acid. (*Jour. A.M.A.*, Oct. 20, 1917, p. 1374).

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Artbur M. Hume, Chairman.....Owosso
 Guy L. KieferDetroit
 W. J. Kay.....Lapeer
 W. J. DuBois.....Grand Rapids

EDITOR

FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
 Grand Rapids, Mich.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnsbuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

January

Editorials

EVERY DOCTOR IN THE MEDICAL RESERVE CORPS.

What an ideal situation it would be, if every doctor in the United States who is mentally, physically and morally fit, was in this Corps.

The time is coming, and in the immediate future, when the Medical Reserve Corps of the Army must be immensely augmented, and so as to enable the Surgeon General to have at his command for immediate assignment, as conditions demand, a sufficient number of trained medical officers, let us take the above thought seriously.

We all know, from past history, the conserving value of an efficient medical corps, and this means number, as well as training.

A statement made by one high in authority in the Surgeon General's Office, "that our fighting forces would be disseminated by sickness and casualties in six months, were it not for an efficient army Medical Corps," clearly emphasizes the importance of every doctor in the United States, meeting the requirements above referred to, accepting a commission in the Medical Reserve Corps of the United States Army.

The struggle in which we are now engaged, and for which we are preparing to take such a prominent part, depends for its success as much upon the medical profession, as it does upon

our combatant forces, and while we do not know that any such intention as herein suggested is in the mind of the Surgeon General, it would at least give him the necessary Corps of medical officers, upon which to draw, and thus serve the best interests of our country, and the best interests of the medical officer serving.

NEW YEAR.

Nineteen Eighteen ushered in with more or less forebodings as to what its days will record upon the pages of history and with thoughts as to what changes will be met in our personal affairs should not envelope us in gloom or cause us in anyway to slow up in our work. Neither should we procrastinate our time or acquire the "putting off" habit waiting to see what trend national affairs assume.

If ever there was need of New Year's resolutions that need now demands universal observance. Resolve now, and firmly, to lend our unreserved support to assist our Government to attain its avowed ends. Resolve to bend every effort to accomplish the universal observance of the rules of food and fuel conservation. Resolve to exert all your inherent ability to become a more capable and efficient physician or surgeon and to contribute your part toward the advancement of scientific medicine and organizational progress. Become an earnest, eager, conscientious member of our profession that is being recognized as a potent factor in the war—receiving recognition, the like of which has never been accorded to us.

No matter who or where you are it is your privilege and opportunity to so do that this year will witness our profession achieving great feats, exhibiting wholesome influences and creating rapid steps of progress that will ever redound to our credit. There is no place for the laggard or he who persists in holding fast to those principles and practices that belong to the past. Events call for energetic progressive activity. It becomes necessary for each one to hustle to remain abreast.

To that end then may we all resolve to do our part. The accomplishment of these duties will cause the close of this new year to be proclaimed a truly happy one. Happy because of the satisfaction that will be experienced by reason of duties and obligations faithfully and successfully performed.

COUNCIL MEETING.

The regular annual meeting of the Council of the Michigan State Medical Society will be held in the Hotel Statler in Detroit on Wednesday, January 16, 1918, at 9 a. m.. The regular order of business will be observed and such other business as may come before the Council as National Events or organizational affairs may indicate will receive official consideration.

Signed,

W. T. DODGE, Chairman.

F. C. WARNSHUIS, Secretary.

DUES.

The 1918 Society dues become payable January 1st. Members have until April 1st to pay these yearly dues. After the latter date members whose dues remain unpaid will be placed upon the suspended list.

County Secretaries are burdened with many duties demanding much of their time. Do not add to their burdens by causing them to take active steps to collect your dues. Do your part to lighten their work by promptly sending them your check. Do it now, lest you forget.

BACK AND FORTH.

Up until a few months ago we were all going "Carrell-Dakin" crazy, and this method of wound sterilization was receiving universal employment whenever infection was encountered. Dakin solution was also being employed in many other conditions with a faith unbounded.

Then comes Morison with his "Bipping" and there flocked to his method of wound sterilization a goodly number of adherents. "Bipping" was frequently resorted to and glowing results proclaimed.

Again, a new voice is heard where Sir Monihan stated at the Chicago meeting that "Dakin's" and "Bipping" were of no potent value and that control cases did just as well with simple saline flushing, or "salt packs" as those subjected to these or both of the other methods.

We have thus, once more, encountered the "Back and Forth" swing of the pendulum of opinion and await the determination of the happy medium. We confess we were enthusiastic over Dakin and have not all together lost faith in it in selected cases or conditions. Likewise "Bipp" won our respect as also the "Salt Packs." However, all of them have been found wanting at times and we are forced to the conclusion that neither are specific or all sufficient.

They are all valuable in certain conditions but demand rigid observance of technic to achieve the greatest beneficial results. It will only be after extended investigation, observation and reviewing of large groups of cases that their inherent value will be appraised. To that end we urge a broad recording of personal observations and experiences with these three methods.

Editorial Comments

From the publications of Wayne and Genesee County Societies we propose selecting from month to month the more interesting communications from their members in active service and to publish them for the benefit of our members. Genesee County is putting out an extremely interesting "News Letter" and the Wayne County War Bulletin publishes communications from its members who are at the front. These letters will be found under Correspondence.

Again we extend the request to members to write us and impart their experiences in active service. We regret that thus far we have failed to receive response to our several letters sent to members of the Shurley and Harper Hospital Units.

The Council will determine the time and place for holding our next annual meeting. The opinions expressed are in favor of a June meeting. Definite announcement will be made in our next issue.

This issue exhausts all of our original manuscript supply. We again urge that manuscripts be sent for publication.

Correspondence

Flint, Nov. 23, 1917

Editor:

Some days ago I received a communication from the Neal Institute, Grand Rapids, offering a reward of \$25 per. I wrote on the margin of the letter the query, "Who eventually pays the twenty five," intending to pass the whole thing along to you to add to the gaiety of your sanctum. It was tossed across the table to the virtual manager of this office who incidentally does the heavy type-writing therefor. And now comes

Chapter II. Fate in its hocus-pocus ordained its return to the Neal Institute and from that concern

I received this morning a reply of which the following is a copy:

"Grand Rapids, Mich.
534 Wealthy St., S. E.

November 26, 1917.

C. B. Burr, M.D., Flint, Mich.

Dear Doctor:

I am pleased to acknowledge receipt of your favor of recent date, asking who eventually pays the \$25.00 commission, and I want to explain to you that I do a strictly cash in advance business. I collect from the patient in advance and pay the doctor in advance, consequently, no one eventually pays anything.

I understand some doctors have been mistreated by former owners of the Neal Institute, but if you bring a patient, please remember that the patient is expected to pay cash in advance before starting treatment, and I will very cheerfully pay you \$25.00 in advance and your railroad fare just as soon as I have completed arrangements with the patient. If you or any of your medical friends bring a patient, rest assured that you will be given a square deal, and there will be no tiresome delays or evasions of responsibility. I trust this answers your question fully, and I shall be pleased to make your acquaintance at any time you visit Grand Rapids. Hoping you will bring us a patient sometime soon, and with kindest personal regards, I am

Yours very truly,

PERRY MILLER."

Although the sarcasm in my inquiry would be to the average mind of almost brutal frankness, it was evidently too subtle and I am regarded as a receptive candidate for what may be euphemistically terms the "subvention." Fortunately, what remains of a sense of humor, shell-riddled during the last three and one-half years, saves the situation.

I lack acquaintance with Perry.

With kind regards, I am

Very truly yours,

C. B. BURR.

Letters From Enlisted Members.

Devonport, England, Oct, 30, 1917.

Dear Friend:—

I have had a little time tonight; I thought I would write a few lines to you.

I went to London and was assigned for a time to a Military Hospital here in Devonport. This town is part Plymouth. From the harbor here the Pilgrim Fathers sailed. Also here Drake met the Spanish Armada. He was bowling on the same green as is here now when they told him, He said "We will finish our game and then finish them."

I am getting some surgical experience here, especially in the care of cases. I don't think much of their surgery. They have a great stunt of "Bipping" their cases, they open up wounds and paint or swab them with Bismuth, Iodoform and Paraffin mixture, hence they call it "B. I. P. ping." They all slough just the same. We have X-Ray and Lab. facilities, no Dakin treatment at all.

Army life is hell, but in we are, so what is the use.

I rather expect to be in France when you get this. I might stay here until spring, but some are going continually. Get ready for a struggle, it is going to tax U. S. A. before we are through.

It rains here every day so it must be fierce at the front.

I did a lumbar puncture on a meningeal case this p. m., got bloody fluid under considerable pressure, a piece of the man's skull is gone.

Met Duke of Connaught and Waldorf Astor last week, but to tell the truth I would rather meet you all in Flint. I would like to know the news of the fellows in Flint, more of the fellows must be gone by now. How are the slackers? Are any of them getting uneasy? God knows they will have their chance yet; they will have to get in.

The poor English people are very much "strafed" as they call, they have made tremendous sacrifices. The English are somewhat shocked by the Americans but the Australians and Canadians broke the way. The Australians are best paid in the war.

It is said that one of the Australians did not salute an English officer in London, upon being stopped and asked if he was a soldier, he replied, "No, I am a fighter." The Australians have been bearing a great deal of the brunt of the fighting I should judge by the wounded we sometimes get right from the front.

We, with all Allies, are hoping for the U. S. troops, guns and machines. The English have done more than we realize at home; they have not shirked a minute. It is only too bad we were not in before, but we all know it takes great provocation to make 100 million of one mind as we all know they are now.

Could use a few smokes, can't buy them here. Do not send expensive ones, a man who smokes a Cinco is a bondholder here.

Well I guess this is all this time. Write me the news of the fellows.

Yours,

Henry Cook.

S. C. Concentration Depot,
Garden City, Long Island, N. Y.

Dear Friends:—

Your letter sent to Fort Riley was forwarded to me here. Congratulations on your new honors. I think the new officers of the county society are quite all right.

Lt Evers and myself, you will remember went to training camp at Ft. Riley together. We spent a pleasant and highly profitable ten weeks there. As far as possible the Commanding officers gave us a choice of assignments. Evers had the choice of several western cantonments and chose Camp Travis, and has been assigned to a Field Hospital there. I was offered an assignment in the Aviation section, which is a part of the Signal Corps.

I left Ft. Riley Oct. 21st, stopped over a day in Flint and reported here Oct. 24th. I found Lt. Reid of our Society here. Had it rather easy for three weeks, but as my family was in a village near Camp, I was able to get off considerable.

We put in some pleasant hours in seeing the sights of the vicinity.

The Camp is about twenty-five miles from N. Y. City, and is an ideal location. The Camp as the name implies is a place where Aero Squadrons are brought and equipped for foreign service, after being trained in various camps in the west and south.

An Aero Squadron consists of 150 enlisted men and nineteen officers. The Medical detachment is composed of an Officer and four enlisted men, a Sergeant and three privates. The Medical equipment is liberal and adequate. The Squadron is equipped (or will be abroad) with eighteen aeroplanes, eighteen trucks (motor) four automobiles and seventy-two machine guns. Each man and officer is furnished an automatic pistol.

The quarters here are permanent and steam heated, in fact this branch of service seems to be getting the best of every thing.

Evidently the "powers that be" are not stopping at expense to get the aviation service up to the highest notch of efficiency.

I am assigned to the 10th Aero Squadron, one of the oldest in the service, and the commanding officer admits that it is the best.

We will doubtless go across in the near future, no one knows the exact date and wouldn't be allowed to let it out if he did know. In fact no one going would care to have publicity made of the event for various reasons.

I see no reason why copies of your sheet would not be allowed in the foreign mails. If I should be fortunate enough to receive one I will be greatly pleased, as news from those in service and at home is like food to a starving man.

Regards to all M. D's.

Sincerely,

Lt. C. S. Ballard.

10th Aero Squadron,
A. E. F. via New York.

Dear Friend:

Allow me to greet you as my worthy successor, and I trust that you and the new president will instill plenty of enthusiasm into the members of our society. They have always had plenty of it, but at this time need to call in all they have held in reserve.

I was very glad to receive a copy of the Letter Box, and feel that the idea is not only an excellent one, but original with our local society, at least I have not heard of a similar publication through any of the physicians I have come in contact with, and all parts of the country seem to be pretty well represented. I know of no other way in which our members may be kept in touch with each other so well.

Was interested in learning of the safe arrival, on the other side, of Clift, Randall and Cook. They are going to see some interesting work from the first. Who is going to be the next one? Nobody knows of course, but we hope they will all be given a chance to show their mettle. Any-one left on this side is going to be a disappointed man.

Have had an exceptionally good opportunity to get first hand facts regarding the overseas pro-

gram, both from a medical and military standpoint. We have with us an English officer, Capt. Walsh, who has spent five years in the British army and who is giving instructions in gas defense. He has spent three years in this war and it is certainly reassuring to see the grim determination and confidence in ultimate victory that he displays, and he claims to be of the same trend of mind that the whole British nation displays. It is certain that the British army has been lifted out of a condition of chaos to that of the most powerful fighting machine.

There are French officers in camp also, and one, the Count de Telier (I do not know if that is spelled right or not) is a very close friend of Capt. Ney of New Orleans, and through him I have made his acquaintance. He surely does not underestimate the power of the enemy, and has been in places that impressed that fact upon him, but he is of the type of French soldier that we read about. He is in earnest and out to win.

Every time I meet him and talk to him I do not dare entertain the hope that I may continue to see service on this side, for if I do I am a coward. From the information received in these conversations the conclusion may be easily drawn that the medical department is playing a large part in the efficiency of the army, and from the prompt aid that is given the death rate is greatly reduced from the severe infections that are so common.

In our own army the medical department never was so efficient nor held such a strong place in the control of line but it has not the strength yet that should be vested in such an important body. The power necessary will come only when there are more medical men of high rank.

Your attention might be called to the fact that a bill was introduced in Congress, during the last session for the purpose of increasing the rank, and incidentally the authority of the medical officers. During the stress of the last few days of the session the bill was allowed to go over. Now there is but one thing to do, and that is to bring the bill back to life again at next session. As you may know the men already in the army cannot or dare not bring any influence to bear in the passage of that bill, so it is up to the men at home. Genesee County Medical Society has never been slow to see the good in a worthy cause and has always been ready to lend a supporting hand. Think this over and start something, and when you have done it give an account of yourself in the Letter Box and I'll be anxiously waiting my copy.

Was glad to hear of the way Flint took care of the second Liberty Loan. I'll have to flatter myself into realizing that our town now has a place on the map. A few years ago if I was away from home I always had to explain where Flint was. That's not necessary any more. This camp is a thousand miles away but the answer is always the same "that is one of the big automobile towns."

A number of Flint physicians have written letters and they have been greatly appreciated. Not all have been answered, but kindly thank them through the Letter Box and assure them

that each and everyone will receive an answer some day.

With best personal regards, I am

Yours truly,

R. S. Morrish.

Copy of Report Sent to Colonel Oliver.

U. S. Army Hospital No. 3, France.

To Colonel Robert Oliver, Chief Dental Corps,
U. S. A., France.

From Major Angus McLean, M. O. R. C.

Subject, Dental, Maxillary and Intra-maxillary Surgery.

As members of the Medical Committee who recently visited Italy to inspect and observe the Sanitary, Medical and Surgical services, we appreciate the opportunity of submitting the following to you on Oral and Intra-dental and Intra-maxillary surgery. We were greatly interested in this special division of surgery, as so much original and splendid work has been done in regional surgery of the jaws.

We inspected several hospitals given over to this line of work entirely. The largest was located in Udine. They had about four hundred and fifty patients when we were there, and had treated over three thousand since the war began.

The hospital was in charge of Professor Pemo and his assistants. Each case was photographed when received, and then X-rayed. In many of the severe injuries, the necessary operation was done in two or three steps, sometimes more. They had intra-dental appliances of all kinds made to suit each case. Dental impressions and models were taken after operation, and every step of the procedure could be followed.

They save all teeth and bony tissue possible, and use bone transplants and inlays and were careful to preserve the mucous membranes. They kept the fragments well braced by contrivances to prevent contraction until the necessary repair had taken place.

They had a large laboratory in which there were twelve men engaged in making intra-dental splints, models, etc.

We had seen several of these hospitals in Europe and it was our opinion that this was the most complete, and from the number of cases that we saw afterwards we were enthusiastic over the work the Italian surgeons were doing in this branch of surgery. Their patients seem to masticate well afterwards, and very few were troubled with drooling. We were greatly surprised at the end results they had obtained, for we had not heard of their splendid work. They kept full records of all cases, and in their museum had the photographs, X-ray pictures, impressions, models and busts of their patients.

They were very courteous to us and anxious to explain all details of their work, and informed us that they would be very proud to have a visit from some of our American dentists.

The whole medical service of the Italian government, we believe very perfect but none was more efficient than this line of work. We fully appreciated our opportunity of seeing it, and trust that some

of our American dentists may visit these hospitals.
November 13, 1917.

Yours very truly,

Major ANGUS McLEAN,

M. R. C. U. S. A. Chairman Com.

Lieut. BROR H. LARSEN,

M. R. C. U. S. A. Secretary Com.

Major H. C. COBURN,

Commanding Officer, Base Hospital, No. 17.

U. S. Army General Hospital No. 1,

Fort McHenry, Md., Dec. 13, 1917.

Dear Editor:

Perhaps a little news of the vicissitudes of one now in the service, though not as interesting as if from the front, may be of some interest to the general profession of Michigan as well as those in particular who are commissioned and awaiting the call to active duty.

On April 24th I received a commission as First Lieutenant and on July 19th was ordered to the Medical Officer's Training Camp at Fort Benjamin Harrison. At first I was surprised at being ordered there. In my profound ignorance I had supposed that my age (55) and my vast experience (?) would put me in some position where I could immediately begin such work as I had been accustomed to do. However, I found—and the farther I go the more I realize the reason—that it is very necessary for a surgeon (all physicians in the service are called surgeons) to know much of military affairs and the discipline appertaining thereto.

I will not attempt to relate the work or the routine of life in the training camp. This is more ably told in the news from the camps in the *Journal of the A.M.A.* each week, as well as in other periodicals, but will try and brief my own experience.

Frequently from Washington comes to the Training Camps the request for men who can qualify for special lines of work. A bulletin may be posted asking for men expert in T. B. work or in Eye, Ear, Nose and Throat, Regimental, etc. I noticed that frequently some one who wanted a change for any reason, though he might not be proficient in the required line, would put his name up in the list for that work, he might have even stated to his friends that he knew nothing in particular about it, but he thought the change would be easier than what he was doing, or he wanted to travel or some such excuse. Thus I saw one man qualify as an Eye and Ear expert and be sent to California, a few days later I saw where he was transferred in the same work to Long Island. This made a nice ride for him and incidentally as he was paid seven cents mileage a good sized check extra from his salary. I saw others too conscientious to express themselves as specially qualified when they knew they were not, waiting and waiting, though heartily tired of the strenuous life they were living. Medical officers were so much in demand that frequently men would be sent out with perhaps only a few days training and sadly in need of necessary knowledge of military customs and Army Regulations. I met many friends and acquaintances among the men from the different parts of our state whom I had known in civil life and I made many new acquaintances only

to be soon separated, with little probability that I will ever see them again.

At least tiring myself of seeing so many of these friends leave, though not really knowing what it meant I signed up for regular service and on Aug. 24th was assigned to Camp Taylor at Louisville for such service. On that date four special trains left Fort Benjamin Harrison with officers and medical corps men one train each, for Camps Taylor, Custer, Grant and to Chillicothe, Ohio. Three officers acting as Captain and Lieutenants were put in command of each detachment of men, which detachments consisted of from six to perhaps thirty men. There might have been really a Captain, but if not the Senior Lieutenant was acting as such; and here let me digress to speak of commissions and ranks. I have been informed that by error my commission was that of First Lieutenant but I saw so much more expected of a higher officer that many times I was glad of the error. I found considerable criticism and sarcasm directed toward those who had higher commissions at first and without the age or experience to justify such rank. I believe that if a man has no knowledge of military work, he will find his work easier in the camps and surely so later, if he begins with the lower commission, and when his promotion comes as it will if he makes good, he will have a much better idea of his duty. I feel that it is rather poor judgment which has lead some of our profession to reject their commissions unless they were higher than First Lieutenant. We may say what we will about the big practice we are giving up, etc., but the question remains, are we giving it up from patriotism? If so the slight difference in salary cuts little figure and the real honor is in going, rather than the rank we carry.

On this assignment I was third ranking officer but thereby I had much less responsibility than the other two. We had twelve men, these were assigned to our acting Captain who was also a First Lieutenant and his troubles were numerous. He had to see that they had proper rations en route and to make proper accounting therefor. To receive and keep up their service records and later when they were assigned elsewhere to see that their records were completed to date among other items being their debts to various army organizations, when last paid to, conduct, etc. He had to make out their pay roll, and to see that they had instruction in the various duties of a soldier, army regulations, first aid, setting up exercises, hikes, etc. Of course each officer had to help in this work but the Captain was responsible. Owing to the unorganization of affairs we had some trouble after our arrival for awhile in getting their mess and making other arrangements. We were there assigned to an Artillery Company, but hardly were we settled and running smoothly, when we separated from our men and each other, each officer being assigned to a Depot Brigade and having four new men assigned to him. While I was in the former organization the first bunch of conscripts began to come in and from this time on, we all had all the time when we were not working with our men, occupied with the examination of these new men. About this time I felt very proud to see my State represented by the Red Cross Organization from Flint which marched in with a fine, well drilled body of men, who received their full share of applause.

In the Depot Brigade I was assigned as Brigade Surgeon, there being five to each infirmary each surgeon had four medical corps men. One of the officers who came with our detachment from Benjamin Harrison happened to be assigned to this infirmary and the other was near by so that we were not wholly separated. Here we held regular sick call, each for his own Brigade, making the regular reports thereto in addition to much other detail work. Sick call I learned was not really a time to attend the sick except in an emergency, or for some trivial trouble, but is primarily to classify those who are able to be on duty and to get the reports back to the brigade commander where they are consolidated and sent on up till they get to the Commanding Officer of the Division, that he may know each day the exact number of men that he has available for active duty. If not able to do duty they are marked quarters, or hospital, and later treated.

By this time I began to know something of what Regimental work was but I saw no patients to speak of, all who were really ill had been sent to the base hospital. It seemed that I never would get beyond reports and what seemed to me petty work, instructions, drills, etc. I visited the Division Surgeon, Col. Allen, and after consulting with him made application for base hospital work and was recommended by him on Dec. 5th. I had met some fine men in this infirmary and was just getting acquainted and a system organized in my work, when orders came separating me from my men and assigning me others and with them to the 306 Inf. When I reported here I was informed that I was the ranking surgeon and as such would take charge of the Regimental infirmary. This was real Regimental work. There were supposed to be four surgeons and a dentist to each Regiment who work together at the infirmary, the ranking one being responsible for all the work and reports. We usually had one hundred or more men at sick call every morning, most of them men who merely thought they were sick or were trying to evade duty, or had some simple ailment. If a man was really very ill he was sent to the base hospital again, and we saw no more of him. Most all of our time was taken with the examination of the drafted men. I had found that the officer (adjutant) was in error as to my being the ranking officer in the Regiment. My commission was the oldest of the surgeons there, which in line determines the rank, but in the medical corps the date of being ordered to active duty determines, and one man already there had been ordered to duty a few days before myself so he continued in command after a slight fright that I had come to displace him, though he was very gentlemanly about it, and if this meets his eye I want to both congratulate him and thank him for his invariable courtesy to me during our short relations.

I have a conundrum "why is a soldier like a poker chip?" "Because he has no home." Hardly had I become acquainted and settled, my room made as homelike as possible and a good mess found, than I heard from my request for Base Hospital work. Orders came assigning me to the above post for surgical work. I packed my locker and bedding roll and after considerable enquiry found that Ft. McHenry was in Baltimore. I got my men changed to my senior officer, completed my records and re-

ports and arrived here Oct. 10th where I found a promotion awaiting me and what seems to be a permanent post where I shall see all the work one can wish for in a professional line.

GEORGE C. HAFFORD,
Medical Captain U. S. R.

Dr. F. C. Warnshuis,
Grand Rapids, Mich.

Dear Doctor:

I am writing to you a long way from home. I left Berrien County in August and spent eleven weeks at Fort Riley, Kansas. Then was sent down here to Camp Beauregard, Louisiana, where I have been for about six weeks. I am enjoying it very much, the weather here has been beautiful since we came here, the last two days have been colder and last night had a little frost.

The Camp has been under quarantine for about three weeks for measles, mumps, pneumonia and meningitis, there was a very high sick rate for a little while, but things are clearing up very nicely and I think soon will be about their normal condition.

Since I came here I have been assigned as an instructor in the Divisional Gas Defense School, which has to instruct the entire division in the methods of gas defensive measures. I am enjoying the work immensely as the other instructors Capt. Furman and Capt. McIntosh are both very congenial and estimable men. Which makes our work very pleasant. There are other two Michigan men down here in the Medical Service, Lieut. A. A. Hoyt of Battle Creek and a man from Alpena. I don't remember his name at present.

I presume you are familiar with the Bill which Senator Owen has introduced in the Senate regarding the status of Medical Reserve Officers, which provides that they will be eligible to promotion in the same way as the regular Medical Corps as high as Major General. We in the Reserve Corps feel this is only fair, as we have the same work to do, it is only fair that we have the same opportunity for promotion. So if you will do what you can to get the profession in Michigan to get in touch with their Congressmen and U. S. Senators to support this bill, you will be doing a great favor to the men who are in the Medical Reserve Corps. Of course we, individually are prohibited from communicating with the Representatives in Congress, so must rely upon the good service of our friends at home.

I shall be very pleased to hear from you if you can find the time, and if I can be of any assistance to you any time shall be only pleased to do whatever lies in my power.

I remain, yours very sincerely,
(Lieut.) DAVID LITTLEJOHN,
1737 White St., Alexandria, La.

Dr. F. F. Warnshuis, Secretary Michigan State
Medical Society, Grand Rapids, Michigan.

Dear Doctor:

Michigan is doing what we have expected and will do more than that. We are simply keeping up with the old heritage of physicians, that they will

be the first to leave everything for service and the last to return.

I think the Michigan State Medical, should have an Honor Roll, which should only include those who have accepted commissions or those who have been rejected for physical reasons.

Examined for Commission, Since Dec. 1st, 1917.

Dr. William Don Ryan, 648 Dix Ave., Dec. 7, 1917.
Dr. William Clarence Kooles, Holland, Mich., Dec. 7, 1917.
Dr. Heine, Mt. Clemens, Dec. 7, 1917.
Dr. Geo. Henry Campau, Providence Hospital, Dec. 7, 1917.
Dr. Morley Sigler Vaughn, Jackson, Mich., Dec. 7, 1917.
Dr. Frank T. Stephenson, Detroit, Mich., Dec. 12, 1917.
Dr. Benj. H. Pronorsky, Detroit, Mich., Dec. 12, 1917.
Dr. A. M. Schaefer, Detroit, Mich., Dec. 12, 1917.
Dr. L. E. Pangburn, Detroit, Mich., Dec. 12, 1917.
Dr. Roht. Cowan, Detroit, Mich., Dec. 12, 1917.
Dr. Albert F. Otton, Detroit, Mich., Dec. 12, 1917.
Dr. Grover C. Wood, 873 Trumbull Ave., Dec. 13, 1917.
Dr. Robert McGregor, Saginaw, Mich., Dec. 13, 1917.
Dr. Eldred Brown, 2035 Jefferson Ave., W., Dec. 13, 1917.
Dr. Langdon T. Crane, Harper Hospital, Dec. 14, 1917.
Dr. James A. McQuillan, Jackson, Mich., Dec. 14, 1917.
Dr. C. E. DeMay, Jackson, Mich., Dec. 14, 1917.
Dr. D. R. Blenderm, 355 Brush St., Detroit, Dec. 14, 1917.
Dr. Victor F. Ryan, Detroit, Mich., Dec. 14, 1917.
Dr. R. S. Goux, Detroit, Mich., Dec. 14, 1917.
Dr. Stephen G. Mollica, St. Mary's Hospital, Dec. 14, 1917.
Dr. Laurence H. Becelaire, St. Mary's Hospital, Dec. 14, 1917.
Dr. Frank B. Gerds, Pontiac, Mich., Dec. 14, 1917.
Dr. Lyle O. Shaw, 202 Marston Ave., Detroit, Mich.
Dr. J. W. Bachelor, Oxford, Mich., Dec. 14, 1917.
Dr. Chas. Lemmon, Harper Hospital, Dec. 14, 1917.
Dr. J. K. Burns, Jr., City Receiving Hospital, Dec. 14, 1917.
Dr. Harold L. Worley, Jackson, Mich., Dec. 14, 1917.
Dr. M. M. Hyman, W. Grand Blvd., Detroit, Dec. 14, 1917.
Dr. L. O. Shaw, 202 Marston Court, Detroit, Dec. 14, 1917.
Dr. John Paul Furns, 461 Gratiot Ave., Detroit, Dec. 14, 1917.
Dr. Zina D. Bennett, 522 Agnes Ave., Detroit, Dec. 14, 1917.
Dr. J. C. Young, Children's Hospital, Detroit, Dec. 14, 1917.
Dr. S. Barnett, Harper Hospital, Detroit, Dec. 14, 1917.
Dr. Paul H. Dretrich, Jefferson Ave., W., Detroit, Dec. 14, 1917.
Dr. William A. Hyland, Grand Rapids, Mich., Dec. 14, 1917.
Dr. Clarence A. Christenson, David Whitney Bldg., Dec. 14.
Dr. Richard F. Boonstra, 510 Jefferson Ave., E., Dec. 15, 1917.
Dr. Carl R. Zollicker, Harper Hospital, Dec. 15, 1917.
Dr. S. S. Skazychi, St. Mary's Hospital, Dec. 15, 1917.
Dr. Henry R. Boyes, Harper Hospital, Detroit, Dec. 15, 1917.
Dr. Thomas E. Hackett, Dowagiac, Mich., Dec. 15, 1917.
Dr. James J. O'Meara, Jackson, Mich., Dec. 15, 1917.
Dr. Charles R. Dengler, Jackson, Mich., Dec. 15, 1917.
Dr. James Cannon, Harper Hospital, Dec. 15, 1917.
Dr. Arthur M. Watson, Orion, Mich., Dec. 15, 1917.
Dr. L. H. Stout, Detroit, Mich., Dec. 15, 1917.
Dr. Clyde H. Chase, Harper Hospital, Dec. 15, 1917.
Forty-eight in all.

Yours very truly,
C. D. BROOKS.

Musterole Poisoning.—D. I. Macht reports the case of a scarlatiniform eruption, evidently caused by an application of Musterole, a proprietary composed essentially of lard or some similar material, oil of mustard, menthol and camphor. Macht reports on the effects of mustard oil and warns against its careless use. (*Jour. A.M.A.*, Sept. 15, 1917, p. 901.)

"Nikalgin."—A report issue of Collier's contains an article of "Nikalgin." Far-reaching claims for its anesthetic and antiseptic virtues have been made. While no very definite information seems to be forthcoming regarding the preparation, it has been said to be "composed of quinine, hydrochloric acid and urea." This would indicate that "Nikalgin" may be nothing more wonderful than the well known local anesthetic, quinine and urea hydrochloride, or a modification of it (*Jour. A.M.A.*, Sept. 22, 1917, p. 1024).

Deaths

Dr. Andrew T. Sherman of Detroit died Dec. 9th at his home on Trumbull Ave. He was a graduate of the Detroit College of Medicine and had practiced in Detroit for twenty-five years.

Dr. Albert H. Steinbrecher, 15 Arden Park, Detroit, died November 25th. He was well known in Detroit, having practiced there for over twenty-six years.

Dr. Julius Wilhelm, one of northern Michigan's promising physicians, died at his home in Traverse City after a long illness.

Dr. F. C. Terrell of Big Rapids, one of the oldest practicing physicians in Mecosta County, died on December 4th from cancer.

Dr. Chas. W. Synder, of Clyde died November 15th after a year's illness of Bright's disease.

Notice of the death of the following doctors not members of the State Society has been received during the month: Dr. I. B. Malcomb of Lowell; Dr. Wm. R. Yuill of Yale.

State News Notes

Dr. J. E. Ferguson of Grand Rapids, was arraigned in Justice Turner's court, Muskegon, on a charge of unprofessional and dishonest conduct. He pleaded not guilty.

Dr. Ferguson, who advertises himself as the United Doctors of America, and has appeared in Muskegon and other cities nearby, was arrested on a complaint made by Dr. George LeFevre. It is said the doctor is unprofessional in his advertising. It is said that the doctor, or the United Doctors of America, say they will cure patients of all diseases, where other doctors have failed.

The Hygeia Hospital is now located in its new and larger quarters at 4733 Vincennes Ave., Chicago, Ill.

Physicians who wish to refer cases of drug addiction and alcoholism to Dr. Wm. K. McLaughlin, Medical Superintendent for treatment, should make special note of the new location of the Hygeia Hospital, since the new quarters are located in a section of Chicago very far from the old address.

Dr. Theo. F. Heavenrich, of Port Huron, who has been seriously ill, suffering from an infection of the face and jaw, contracted as a result of operating on a septic arm, has entirely recovered and has again resumed practice.

The following Committee has been appointed by General Pershing, upon the recommendation of Surgeon General Bradley:

Major Angus McLean,
Major George E. McKean,
Major Harry N. Torrey.

First Lieutenant, Bror H. Larsson, will accompany the expedition as secretary. Captain James W. Inches will represent the American Red Cross in the same mission.

Its object is to study hospital conditions in Italy, surgical treatment and sanitary medicine.

Permission for this investigation was first obtained through the Italian military authorities and was granted for fourteen days.

Majors McLean and McKean were presented to Marechal Joffre and his staff, who heartily approved of the projected trip.

This is the first American Expedition to visit and its appointment may be considered as a compliment to Base Hospital No. 17, as well as to the city of Detroit.

The Committee will report back to Chief Surgeon, General Bradley and to the *Journal of A.M.A.* and the Military Surgeon.

Hospital Unit Q, Grand Rapids, Major R. R. Smith, Director, were ordered to Ft. McPherson, Ga., on Dec. 15th.

Dr. James W. Inches of Detroit returned home December 3rd after a six months tour of the French, Italian and British fronts in behalf of the American Red Cross.

Dr. B. M. McMullen of Cadillac has been a patient of the Mayo Clinic. He received treatment for a benign lesion of the lower jaw.

Dr. Duncan Campbell of Avoca has moved to West Branch, Michigan.

Dr. S. M. Cornell and Mrs. Ida McCrane of Bronson, Mich., announce their marriage on December 1.

Dr. G. J. Warnshuis of Herried, S. Dakota, has become associated with his brother in Grand Rapids.

Dr. Spencer D. Guy has located in Benton Harbor.

Dr. G. L. Bliss has removed from Three Rivers to Kalamazoo.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

EATON COUNTY

The annual meeting of the Eaton County Medical Society was held at the Phoenix Hotel, Charlotte, Mich., Thursday, Nov. 22, 1917. Dinner was served to sixteen members, following this the meeting was called to order by President Burleson.

Dr. Hugh Myer of Potterville was made a member.

Dr. Blanchard, chairman of County Defense Medical Committee reported that Dr. Wilson Canfield had been named vice chairman and Dr. W. E. Newark assistant Secretary.

Dr. A. G. Sheets, Chairman of Fee Committee offered the following resolution and moved its adoption.

Resolved that the schedule of fees as adopted by the Eaton County Medical Society shall affect all members of this Society, and shall govern and guide all members in submitting bills for professional services. Any violation of this resolution will constitute a sufficient cause or reason for preferring charges against a member and when such violation has been proven to the satisfaction of a majority of the members he shall be deemed guilty of unprofessional conduct and shall be suspended or expelled from the Society.

NOTICE.

For some time past the members of the Eaton County Medical Society have felt the necessity of revising their schedule of fees.

The sharp advance in the cost of medical supplies and surgical dressings together with our inability to gather any authentic data as to when we might expect relief, have influenced us to do this at this time.

The new schedule is but a slight advance over the one that has prevailed in all parts of the county during the past five or six years, and is as follows:

Schedule of fees adopted by Eaton County Medical Society to take effect December 15, 1917.

Office prescriptions, \$1.00.

Examinations—Blood, \$5.00; urine, not less than \$1.00; stomach contents, \$5.00; sputum, \$3.00; Wassermann, \$10; physical examination, \$1.50 up.

Consultation—\$5.00, plus mileage.

City calls—\$1.50 day, \$2.50 night. Calls between 7 a. m. and 7 p. m. shall be considered as day calls. and calls between the hours of 7 o'clock p. m. and 7 o'clock a. m. shall constitute night calls.

Country Calls—\$1.50, plus mileage 50c per mile.

Administration of anesthetic—Minor operations, \$5.00 plus mileage; major operation, \$10.00 plus mileage.

Obstetrics—\$15 up plus mileage, cash.

Obstetrics—Instruments, \$25 plus mileage, cash.

Fractures—Femur, \$50; tibia and fibula, \$25 up; humerus, \$25 up; colles, \$25; ulna and radius, \$25; wrist or ankle, \$15 to \$25, clavicle, \$15 to \$25; one or more ribs, \$5.00 up; skull \$25 up.

Dislocation—Hip, \$25 to \$50; shoulder, \$15 to \$25; elbow, \$25 to \$35; knee, \$25.

Removal of foreign bodies from eye, \$2.00.

Advice by telephone, day, 50c; night, \$1.00.

Signed by

A. G. SHEETS, Chairman.

P. H. QUICK, Secretary.

ELECTION OF OFFICERS.

President—Dr. F. R. Blanchard, Eaton Rapids.

Vice President—Dr. A. G. Sheets, Eaton Rapids.

Secretary-Treasurer—Dr. P. H. Quick, Olivet.

Delegate—Dr. F. J. Knight, Charlotte.

Alt. Delegate—J. D. McEachron, Vermontville.

Medico-Legal—A. W. Adams, Bellevue.

BOARD OF DIRECTORS.

Dr. A. R. Stealy elected to succeed self.

Dr. Chas. Huber to fill Dr. H. Rockwell's vacancy.

1. Chas. Huber Term expires 1918

2. C. A. Stimson Term expires 1919

3. W. E. Newark Term expires 1920

4. C. C. Sackett Term expires 1921

5. A. R. Stealy Term expires 1922

All committees to be appointed by President Blanchard at later date. It was voted and carried that the President appoint two members along with the Secretary, to revise and bring by-laws up to date. Drs. Blanchard and Sheets were appointed.

G. M. BYINGTON, Secretary.

INGHAM COUNTY

The Ingham County Medical Society held its annual meeting December 21, 1916.

PROGRAM.

Bone Pathology—January 25, 1917, Dr. Richard R. Smith, Grand Rapids.

Acidosis—March 29, 1917, Dr. N. B. Foster, Ann Arbor.

Medical Preparedness—May 3, 1917, Dr. H. A. Haze, Park Lake—September 6, 1917. All

Business Meeting—September 27, 1917, Chamber of Commerce.

Typhoid Fever—October 11, 1917, Dr. A. A. Spoor. Business Meeting—November 20, 1917, City Hall.

Standing Committees of the Ingham County Medical Society.

Advisory Council—Drs. A. D. Hagadorn, Harry A. Haze, L. Anna Ballard.

Executive Committee—Drs. G. F. Bauch, R. E. Miller, S. H. Culver.

Program Committee—Drs. C. V. Russel, W. G. Wright, R. H. Crissey.

Entertainment Committee—Drs. B. M. Davey, B. D. Niles, E. F. Carr, Fred J. Drolette.

Public Health—Drs. J. F. Rulison, O. H. Freeland, Herbert Landon.

Legislative Committee—Drs. F. M. Huntley, A. M. Campbell, O. A. Tooker, Fred Seger.

PHYSICIANS IN THE SERVICE.

Dr. H. S. Bartholomew.

Dr. Clara M. Davis.

Dr. M. L. Holm.

Dr. Herbert Landon.

Dr. R. R. McCrumb.

Dr. Milton Shaw.

The annual meeting of the Ingham County Medical Society was held December 6th, 1917, in Lansing in the Hotel Downey.

A report of a detailed study by a local legal firm of policies for medical protection of the Medical Protective Company of Fort Wayne, Indiana, and of the Aetna Company under its group plan was given the Society but no action was taken, the matter being left in the hands of a committee in charge of this investigation. A resolution designating the Society's approval and willingness to co-operate with the State Board of Health and the druggists on the War Measure which makes it compulsory for physicians to report all cases of venereal disease was passed and copies of it are being distributed.

The following officers were elected for the ensuing year:

President—Claude V. Russell, Lansing.

Vice President—John G. Rulison, Lansing.

Secretary-Treasurer—Earl I. Carr, Lansing.

Delegate—Freeman A. Jones, Lansing.

Alternate—O. H. Freeland, Mason.

The retiring president's interesting address was entitled "One day in my general practice."

The Secretary was instructed to write for the Society messages of good cheer to all absent members in military service.

Retiring President and Mrs. Freeman A. Jones gave the Society and their wives a dinner in the grill at the close of the business meeting. After the dinner there was the following patriotic program:

"The Physician in this War," address, Dr. F. A. Jones.

"Red Cross Work," address, Mrs. C. L. Barber.

"Star Spangled Banner," by orchestra while a silk flag was floated through the room.

Eulogy to our IFag," oration, Mrs. Karl Brucker, "America."

E. I. CARR, Secretary.

KALAMAZOO ACADEMY.

Secretary's Annual Report for 1917.

To the Officers and Members of the Kalamazoo Academy of Medicine:

Your Secretary is pleased to submit his second annual report.

During the year, the Kalamazoo Academy convened regularly twice each month. All meetings

were held in the Academy rooms except for our two summer meetings held in Allegan and South Haven, at which places we were royally entertained by the local profession. It is understood that the Academy has an invitation to hold one of our summer meetings at the resort home on the lake at South Haven of one of Chicago's prominent physicians.

Our President presided at all sessions except on one occasion when he was confined to the hospital.

Our Program committee furnished the Academy with excellent programs and at each meeting we were host to some distinguished out-of-town physician.

Noon-day luncheons in the honor of our guests were held at the Park-American Hotel on each Academy Day. These luncheons were poorly attended, on several occasions only three or four were present. The fact is to be regretted because of the poor impression it gives our guest. During the coming year, may each Academy member form the habit of being present at these luncheons.

Twenty-three of our members have given their services to their country and were commissioned as follows:

Captains, 5; Lieutenants, 15; special work, 2, and application pending, 1.

Two of the twenty-three have arrived safely in France, twelve are receiving intensive military training at the various camps and forts and five are awaiting orders.

The Bulletin has been published regularly, announcing the programs, giving abstracts and reviews.

The attendance during the first half of the year was very good. During the last six months, the attendance has fallen off considerably. This is thought to be in large part due to the fact that our members remaining have had more work to do because of those in military training.

The Academy of Medicine has in the past experienced no difficulty in obtaining the best medical talent in the land. If we are to continue being so fortunate, we must have a full attendance at our Society meetings.

Respectfully submitted,

Leslie De Witt.

Treasurer's Annual Report for 1917.

(Dr. LeLand)

Receipts

Balance Dec. 2, 1916	\$ 61.99
Received from active members	1,081.11
Received from associate members	13.50
Drawn from special assessment fund	32.00
Received from M. Fisher	3.69
Refund by American Medical Assn.	7.00
Received on special assessment	8.00
Received from Nurses' Association	25.00

\$1,232.29

Disbursements			
State Society	\$ 458.50		
Guests	56.16		
Postage and stationery.....	59.80		
Printing and Bulletins	33.35		
Library	73.45		
Telephone and telegrams	73.05		
Janitor and cleaning	14.93		
Stenographer and clerk	45.69		
Lighting	25.96		
Flowers and music	5.50		
Kalamazoo Loose Leaf Binder			
Co.	7.45		
J. R. Jones for sheets	1.50	855.34	

Balance in checking fund to			
Dr. Barrett		\$ 376.95	
(Dr. Barrett, Acting Treas.)			
Receipts.			

Balance from Dr. LeLand	\$ 376.95		
Received from war relief assess-			
ment	170.00		
Refund, Typewriter Co.	4.50		
		\$ 551.45	

Disbursements			
State Society war fund	\$ 100.00		
Guests	9.00		
Postage and stationery	21.35		
Printing and Bulletins	34.15		
Library	4.00		
Telephone and telegraph	32.38		
Cleaning rooms	12.15		
Stenographer and clerk	18.15		
Lighting	10 00		
Flowers	7.10		
Insurance	10.20		
Dray .....	.25		
Transferred to savings acct.			
spec. assessment fund	78.00		
		336.73	
Balance forward		\$ 214.72	

Total Report, 1917.			
Receipts			
Balance Dec. 2, 1916	\$ 61.99		
Received from active members	1,081.11		
Received from associate mem-			
bers	13.50		
From special assessment for li-			
brary	32.00		
Received from M. Fisher	3.69		
Refund by A. M. A.	7.00		
Received from first assessment			
fund	3.00		
Received from second assess-			
ment fund, war relief work ..	175.00		
Received from Nurses' Associa-			
tion	25.00		
Refund, Detroit Typewriter Co.	4.50		
		\$1,406.79	

Disbursements			
State Society dues	\$ 458.50		
State Society war fund	100.00		
Guests	65.16		
Postage and stationery	81.15		
Library	77.45		
Telephone and telegraph	105.43		
Janitor and cleaning	27.08		
Stenographer and clerk	63.84		
Lighting	35.96		
Flowers and music	12.60		
Kalamazoo Loose Leaf Binder			
Co.	7.45		
J. R. Jones Sons & Co., sheets	1.50		
Insurance	10.20		
Dray .....	.25		
Printing and Bulletins	67.50		
Transferred from spec. assess-			
ment fund to savings account	78.99	\$1,192.07	
Balance forward		\$ 214.72	

Special Assessments Fund			
Receipts			
Balance forward, 1916	\$ 212.61		
One member paid on first spec.			
assessment	3.00		
35 members paid on 2nd spec.			
assessment	175.00		
(War Relief Fund)			
Interest for 1917	5.93		
		396.54	

Disbursements			
To State Society war relief fund	\$ 100.00		
Books for library	32.00	132.00	
Balance		\$ 264.54	
Total of cash funds of Academy		\$ 479.26	

Estimated Budget for 1918			
State Society dues, 109	\$381.50		
State Journal for Military Men	34.50		
Guests	100.00		
Stenographer	50.00		
Postage and stationery	100.00		
Flowers and music	25.00		
Lighting	10.00		
Janitor service	30.00		
Library	50.00		
Telephone and telegraph	40.00		
Printing	125.00		
		\$946.00	

Estimated Receipts			
54 members at \$8.50	\$459.00		
55 members at \$6.00	330.00		
7 associates at 2.50	17.50		
		\$806 50	
A. W. Crane,			
* Chairman, Budget Committee.			

Annual Report of the Program Committee

The Kalamazoo Academy of Medicine held twenty-two regular meetings during the year of 1917, twenty being held in our Academy rooms and one each in South Haven and Allegan, where

the members greatly enjoyed the hospitality of the resident physicians. Papers were presented by ten of our own members during the year and we were honored by having twenty-two distinguished guests and essayists from the following cities: Chicago, Detroit, Ann Arbor, Grand Rapids and Camp Custer.

Two clinics were held during the year and numerous case reports given by local members. The thirty-two papers presented covered a wide range of subjects, embracing nearly every department of medicine and surgery.

Your committee feels that the general character of the papers presented during the year has been exceptionally high and wish to express our appreciation for the hearty response that our efforts have elicited.

Respectfully Submitted,

J. T. Upjohn, Chairman.

Annual Report of the Clinical Committee.

The Clinical Program committee has furnished material for one clinic during the year. This was conducted by Doctor Andrew P. Biddle, president of the state society, on Feb. 13, 1917. Cases of epithelioma of the face, secondary syphilis, acne rosacea and other interesting skin lesions were shown.

John B. Jackson, Chairman.

Annual Report of the Library Committee.

The following journals were subscribed for during the year and for one or more following years will be on file:

Surgery, Gynecology and Obstetrics.

Annals of Surgery.

Journal of Laboratory and Clinical Medicine.

Archives of Internal Medicine.

Journal of Endocrinology.

American Journal of Medical Sciences.

American Journal of Diseases of Children.

These journals are taken that they may meet the wants of the differently inclined members of the Academy. Various state journals and some other publications are sent to the Academy and contain valuable and original articles.

Among these are the Public Health Bulletin of the U. S. A., New York State Journal of Medicine, Indianapolis Medical Journal, St. Paul Medical Journal, Cleveland Medical Journal.

The A. M. A. Journals for five years are on file in the room, back of the lavatory. Journals for 1917 are on file in the book cases, which also contain the following journals for several years:

Surgery, Gynecology and Obstetrics.

Annals of Surgery.

Public Health Reports and Monographs.

Old medical books, dating back to 1739 are for observation in the right-hand bookcase.

The writings of Weir Mitchell, bearing in a unique way upon medical problems from his point of view, were placed on the shelves this year and paid for from the special assessment fund in the bank of \$212.00. All journals received are reviewed and notice of the leading articles is published each month in the bulletin. Periodicals removed from the library for a limited time

are to be recorded in a book for that purpose lying on the journal rack.

Surgery, Gynecology and Obstetrics for 1913 are asked for the files, and also the Annals of Surgery for 1911-12-13 and 14. It seems advisable to continue the standard journals subscribed in 1917, each being definitely different and valuable, and needed for reference in cases and papers.

Focal Infections—Billings, has been placed in the library and among the books received is the Proceedings of the Institute of Medicine of Chicago, which contains papers presented by its notable members. There is an apparent omission in the library of the personal history in Medicine. Several most interesting books have recently been published and are of wide sale. Many societies have a historical club in their organization.

Blanch N. Epler, Librarian.

Annual Report of Social Hygiene Committee

Your committee wishes to express its realization of the unusual significance of social hygiene work at this time. It has endeavored to approach and meet the problem through educational propaganda. Shortly following its appointment the chairman endeavored unsuccessfully to secure the introduction of systematic instruction along these lines in all of our city schools. Failing in this effort an attempt was made to secure similar results by working through our five social centers. Through the hearty cooperation of the chairman of this work, Mrs. A. J. Mills, plans have been completed for a series of three talks to mothers and daughters, and of three to fathers and sons in each social center, a total of thirty addresses to be given during January, February and March. These plans will be promptly placed in the hands of the chairman of the in-coming committee.

Your committee has proffered its services to the War Aid Association, to the Secretary of the Federal War Recreation Work and to the Council of National Defense. Each individual of the committee has contributed to its work, both in time and effort, results have been accomplished in the higher educational institutions of our city and numerous lectures before various groups in and out of the community have been given. Especially should the splendid and extensive work of Dr. Alice Barker-Ellsworth in conjunction with the Y. W. C. A. and First Aid classes be recorded. She has given a series of six lectures, with an average attendance of one hundred and eight; a series of three lectures, with an average attendance of twenty-five and a series of twelve lectures with an average attendance of forty-two.

While your committee feels that "the single address" is better than none it wishes to record its conviction that best results can be reached only through a series of about three talks, laying a foundation and securing a friendly relation with the group and thus avoiding the psychological embarrassment and unnaturalness of the more precipitate approach to a problem at one both intricate and exceedingly difficult of presentation.

Under the date November 12, 1917, the Secretary of the State Board of Health issued a circular letter to the physicians of the State of Michigan relative to the reporting of venereal diseases. Your committee wishes to express its commenda-

tion of this movement and would recommend the action of the State Board of Health and express its hearty co-operation in accomplishing the desired results. Respectfully submitted,

Dr. L. H. Harvey, Chairman.

Annual Report of the Social Functions Committee.

As chairman of your Social Functions committee, I beg to submit the following report:

We have had luncheon at the Park American preceding each meeting, at which the out-of-town essayist has been entertained.

These luncheons have been fairly well attended.

Respectfully submitted,

E. P. Wilbur, Chairman.

LAPEER COUNTY.

At a meeting of the Lapeer County Medical Society, held at Imlay City, November 13, 1917, Dr. J. P. Suiter, of Hadley, one of Lapeer county's oldest physicians, was elected an honorary member.

Dr. W. H. Marshall of Flint, was present and gave a very interesting talk on the General Organization of Medical Service from the Firing Line to the Convalescent Hospital.

He spoke at length on the diseases prevalent with the armies in France—cerebral spinal fever, trench feet, gas poisoning, trench fever, trench nephritis, infective jaundice, amebic dysentery, and shell shock. Dr. Marshall's subject was a live one in the hearts of all American physicians, and he handled his subject in such a manner that he gained the admiration of his hearers, speaking as he did from personal experience, after nine months' service with the British armies in France.

Dr. H. R. Varney of Detroit, then followed with a talk on syphilis, making an old subject a new and live one, thereby bringing out many things along the line of diagnosis and treatment.

Dr. Varney said with an early diagnosis, he believed the disease easily curable before the infection had gained headway along the lymph system, and unlike the old teaching, to wait for the secondary symptoms to appear, advised the proper tests being made at once, followed by proper treatment if tests proved positive in reaction. The importance of recognizing the cancered finger nails as a point in diagnosis was impressed upon us.

The profession was warned to be ready to cope with the disease when the soldiers returned from France, stating that it had been the history of all wars to spread venereal diseases, and in this particular war, the various types from the various nations involved will be cut loose in America. He brought out the point that an active syphilitic was not a good soldier, had brain storms, and was a coward.

Dr. Varney advised physicians to shoulder the troubles of the syphilitic and if possible persuade them to allow their physician to direct their career. Thereby many of them would be prevented from becoming charges in our public institutions.

The meeting adjourned with a vote of thanks being tendered to Dr. Marshall and Dr. Varney.

C. M. BRAIDWOOD, Secretary.

ST. CLAIR COUNTY.

The regular meeting of the St. Clair County Medical Society was held at the Harrington Hotel, Thursday evening, November 8th.

Dr. Geo. Kesl was elected a member to the Society.

Dr. J. B. Bruce of Saginaw gave a very interesting address on the Base Hospital Work of England and France.

Thirty-six members were present at the meeting.

The regular meeting of the St. Clair County Medical Society was held at the Harrington Hotel, Thursday evening, November 22nd.

Dr. H. Wellington Yates of Detroit was present and gave a very interesting talk on "Cancer in Women," which was appreciated by all present. Discussion opened by Dr. McKenzie, followed by other members of the Society.

W. W. RYERSON, M.D., Secretary.

The regular meeting of the St. Clair County Medical Society was held at the Harrington Hotel, Thursday evening, Dec. 13th, 1917.

Dr. Smith of St. Clair read a very interesting paper on "The Future Practice of Medicine," which was enjoyed by all present.

Dr. Chester gave a review of the work covered during the year which is hereto attached.

A motion was made and seconded that the papers read by Drs. Smith and Chester be forwarded to the *State Journal* for publication. Carried.

ELECTION OF OFFICERS.

President—R. K. Wheeler, Port Huron.

Vice President—S. K. Smith, Port Huron.

Secretary-Treasurer—W. R. Ryerson, Port Huron.

Delegate—Dr. Chester, Emmett.

Alternate—Dr. Heavenrich, Port Huron.

A BRIEF REVIEW OF THE YEAR'S WORK DONE BY THE ST. CLAIR COUNTY MEDICAL SOCIETY.

Jan. 11.—Dr. A. J. McKenzieFractures

Dr. C. B. StockwellSkin Grafts

At this, the first meeting, Dr. McKenzie set a high standard by showing good preparation and having committed his paper to memory. Through the whole series of meetings the members lived up to this standard.

Dr. Stockwell's address created great interest.

Jan. 25.—Dr. James McCabe,

Occipito Posterior Presentation.

Dr. T. A. McGrath, Allen Treatment in Diabetes

Dr. McCabe's lecture was appreciated and well discussed, while that of Dr. McGrath was voted the last word on the subject.

Feb. 8.—Dr. M. E. Vroman,

Points of Interest to the General Man.

Dr. Theo. HeavenrichAs Others See Us.

Points of General Interest were of interest and the second subject, being the views of those outside of the profession, was also very interesting.

Feb. 22.—Dr. Chas. F. Kuhn..Intestinal Obstruction.

This was a splendid surgical paper.

March 8.—Dr. J. J. Moffit,
Surgical Anatomy of the Tonsil.
Dr. D. K. SmithAcidosis

Dr. Smith's address was appreciated by those present, and he has been requested to give another paper on the same subject.

The first was a very instructive lantern slide demonstration.

March 29.—Dr. R. R. SmithGoiter
Dr. Wm. M. DonaldAlcohol

The first was a splendid talk with lantern slide demonstration. In the second number Dr. Donald, who is an orator, sustained his reputation.

April 12.—Dr. W. J. Wilson,
Diagnosis, Prognosis and Treatment of
Common Heart Diseases.

This was of interest to all.

April 26.—Dr. A. P. Biddle,
The Duty of the Medical Profession in the
Present War.

Dr. Biddle, who is the President of the State Medical Society, is a military man. His address was inspiring.

May 8.—Dr. A. J. Attridge,
Pelvic Infection—Lantern Slide Demonstration
Dr. J. L. ChesterDiseases of the Esophagus
Dr. Attridge's paper was discussed until the "wee sma hours."

July 12.—Dr. J. L. Chester,
The Use and Abuse of Tuberculin.

Sept. 27.—Dr. Wm. De Kleine,
The Early Diagnosis of Tuberculosis
Dr. J. L. Chester,
Tuberculin as a Therapeutic Agent

Dr. De Kleine's splendid lecture contained the very latest information on the subject.

Nov. 8.—Dr. James Bruce,
Surgery and the Diseases met with from the
Trenches to the Base Hospital.

Dr. Bruce had seven months actual experience in the war zone and was listened to with much interest. He did not talk over the heads of the doctors.

Nov. 22.—Dr. H. Wellington Yates,
Cancer in Women

This paper should be published.

Dec. 13.—Dr. W. H. Smith,
The Future of the Practice of Medicine
This paper will be published in the *Journal*.

In all there were twenty-one papers given. Dinner was served at every meeting. All feel better after a good meal. When the doctor's get together often, put their feet under the same table, swap experiences and smoke, a good feeling toward each other must prevail. This is one reason why there is such a universal brotherhood among the medical profession of St. Clair County, and to us can there be anything so sublime?

The destiny of a medical society "lies in the principles which govern its policy and bears rule in the hearts of its members." A society is just what its members make it. The co-operation of most of the members will make the society a great success for all. The splendid success of the St. Clair County Medical Society during the past year is surely

not due to any work the President has done. It is due to the splendid cooperation of most of the members and the help given by the vice-president, Dr. D. J. McCall, who took the chair at three meetings and, in the absence of the Secretary, made all the arrangements for one.

The President wishes to acknowledge the untiring work of the Secretary, Dr. W. W. Ryerson. More work could have been done during the past year and the society have been of greater value to all. However, I am sure the society will meet with greater success in the future through the full and ungrudging cooperation of all the members.

In behalf of the society I wish to extend our appreciative thanks to all the members who have read papers. Their names are given above and the society is surely indebted to them.

There was an average of twenty-four at each meeting. No one questions the fact that great good is gotten from these meetings. It is really a post graduate course for all who attend, stimulating each to do better work.

Whether the papers were given by home or outside doctors made no difference with the attendance. All papers were well discussed, especially papers given on surgical subjects. Papers given by some doctors were usually discussed "to a frazzle."

RECOMMENDATIONS.

The society should have a library. A nucleus could be started at very small expense and the library, in time, would be a great help to the profession of St. Clair County.

There ought to be committees to review the current medical literature, such as the *Medical Clinics of North America*, *Surgical Clinics of Chicago*, *British Medical Journal*, etc., and give clear, yet succinct, reports once a month.

The meetings for the year should be arranged for as early as possible and the program announced at least two weeks before each meeting in order that all may have an opportunity to review the subjects. It stimulates interest and brings out better discussions. If a doctor has looked up a subject and is prepared to discuss it, he will make a sacrifice to attend, but if he knows little or nothing of the topic to be presented he'll have very little interest and make no special effort to go. When possible a synopsis of paper to be read should be given to the members a week or ten days before they are presented.

Who should attend the meetings of the County Medical Society? All the doctors in the county. Those who do not attend are not fair to other physicians, their patients or themselves. If a doctor is a student and desires to progress, the society meetings furnish the stimulus and a splendid opportunity. On the other hand if he is at the head of his profession and knows it all, he violates his Hippocratic oath by not attending the meetings to impart his knowledge of medicine, surgery and all the specialties to his brother practitioners.

The meetings should be held bi-weekly. There is more interest taken and the attendance is better if the meetings are held often—at least twice a month.

J. L. CHESTER.

NEUTRAL SODIUM SOAP.
THE PREPARATION AND STANDARDIZA-
TION OF OVARIAN AND PLACENTAL
EXTRACTS.—SURGERY, GYNECOL-
OGY AND OBSTETRICS, VOL.
XXX, 1917, 324.

Morley gives due emphasis in his article to the need for more uniform methods in the preparation of ovarian and placental extracts. Tangible laboratory and clinical data are still moreover lacking in extent. A review of the more important articles on the above subject reveals the circumstance that it is only within the last ten years that an attempt has been made to isolate the active principle of the ovary and placenta, especially the former. Iscovesco (1908) obtained "lipoids" from the red blood corpuscles, hypophysis, kidney, adrenals, ovaries, the testicles and the corpora lutea, and discovered they exerted a certain action on the female genitalia. The "homo-stimulating" lipoids exercising an action on different organs—this division he discovered later being purely arbitrary. Hermann (1915) believes he has succeeded in separating the "active substance" of the corpus luteum and of the placenta as a specific chemical substance, having identical physiological properties. Hermann possibly obtained his so-called active substance in the purer state. After engaging in special research work along this line during the last two years, Morley expresses the opinion that up to the present time no ideal method of preparation has been formulated, and until that is accomplished, standardization of the product will not be attempted. Considering the newness of the subject the article concludes with quite an extensive bibliography.

"Patent Medicines" here and in Canada.—The federal law governing the interstate sale of "patent medicines" prohibits false and misleading statements in regard to composition and origin and false and fraudulent therapeutic claims. The Canadian law offers no protection against false, misleading or fraudulent statements that may be made for products of this class. As a result, many claims made for "patent medicines" when sold in Canada are not made when the same preparations are sold in the United States. An examination of Dodd's Kidney Pills, Doan's Kidney Pills, Williams' Pink Pills for Pale People, Paine's Celery Compound, Hall's Catarrh Medicine, Hood's Sarsaparilla, Dr. Chase's Nerve Pills, and Gino Pills as sold here and in Canada leads to the conclusion that the "patent medicines" industry as a whole is founded on falsehood, and that misleading and false claims will be made for such preparations, at least in the majority of cases, just so long as manufacturers are subject to no restraint except their own consciences (*Jour. A. M. A.*, Nov. 10, 1917, p. 1636).

Shot-gun Vaccines for Colds.—There is no reliable evidence for the value of mixed vaccines in the prevention or treatment of common "colds" and

similar affections. The Council on Pharmacy and Chemistry accepted for New and Nonofficial Remedies mixed vaccines only on condition that their usefulness has been established by acceptable clinical evidence. So far it has not admitted any of the "influenza" or "catarrhal" mixed vaccines (*Jour. A. M. A.*, Nov. 10, 1917, p. 1642).

Iodeol and Iodagol.—Iodeol and Iodagol (formerly called Iodargol) are the products of E. Viel and Company, Rennes, France. They have been widely and extravagantly advertised in the United States as preparations containing colloidal, elementary iodine, and with the claim, that, because of the colloidal state of the iodine, they possessed the virtues but not the drawbacks of free iodine. As the result of chemical examination, pharmacologic, bacteriologic and clinical investigation and a study of the submitted evidence, the Council on Pharmacy and Chemistry declared the products inadmissible to New and Nonofficial Remedies because they did not contain the amounts of iodine claimed; because the iodine was not in the elementary or free condition but behaved like fatty iodine compounds, and because the therapeutic claims were exaggerated and unwarranted. The American agents, David B. Levy, Inc., announce that the sale of Iodeol and Iodagol has been discontinued (*Jour. A. M. A.*, Nov. 17, 1917, p. 1725).

The Carrel-Dakin Wound Treatment.—Arthur Dean Bevan holds that the value of the Carrel-Dakin method of treating infected wounds has not been established. He has been forced to the conclusion that Carrel's work does not meet the requirements of scientific research. Bevan believes that the choice of antiseptics in the treatment of infected wounds is of little moment, and that the use of the Carrel-Dakin fluid, like Koch's lymph, Bier's hyperemia and the vaccine therapy of acute infections, will have a short period of popularity (*Jour. A. M. A.*, Nov. 17, 1917, p. 1727).

Sphagnum Moss, A Surgical Dressing.—In England, sphagnum moss, or peat moss, is being used as a substitute for absorbent cotton. The dried moss is said to absorb twenty-two times its own weight of water, while absorbent cotton will not absorb more than six times its weight. For surgical use the dried moss is packed loosely in muslin bags which are then sterilized by heat or chemicals such as mercuric chloride (*Jour. A. M. A.*, Nov. 24, 1917, p. 1798).

Adulterated Imported Drugs.—The U. S. Department of Agriculture announces action against imports of adulterated drugs. Belladonna root was adulterated with yellow dock; cantharides was adulterated with so-called Chinese blister flies, and cinchona bark offered for entry was deficient in

alkaloid. Other drugs were illegally labeled (*Jour. A. M. A.*, Nov. 24, 1917, p. 1792)

Bell-ans (Pa-pay-ans, Bell).—Bell-ans, formerly advertised as Pa-pay-ans (Bell) in medical journals, is now advertised in newspapers and in medical journals. Among the extravagant claims made for this preparation is the claim that there is no derangement of the digestive organs on which the proper dose of Bell-ans will not act quickly and pleasantly. Instead, proper treatment must aim to determine the cause and attempt its removal, the choice of drugs depending on the conditions that give rise to indigestion. The treatment of indigestion by a single prescription or combination is wholly irrational. While Bell-ans, under its old and new name, has been alleged to contain papain or to be some preparation of the digestive juice of the fruit of *Carica papaya* with other substances, chemists have failed to find papain or to determine the digestive power of the tablets. Bell-ans is essentially a tablet of sodium bicarbonate and ginger, and has all of the virtues, which are few, and all of the limitations, which are many, of a tablet of sodium bicarbonate and ginger. The Council on Pharmacy and Chemistry examined Bell-ans nearly eight years ago, and the statements made in that report are as incontrovertible today as they were then (*Jour. A. M. A.*, Nov. 24, 1917, p. 1815).

The Handicap of Proprietorship in Medicine.—Dr. J. J. Mundell protests because his article on the present status of pituitary extract in labor was abstracted in "Therapeutic Notes" in a way which appears to him a gross misrepresentation of his attitude toward the use of pituitary extract. Being a house organ, "Therapeutic Notes" contained only those portions of Mundell's article which may be expected to promote the firm's proprietary pituitary preparation. The references to the dangers and the limitations of pituitary extracts were not abstracted (*Jour. A. M. A.*, Nov. 24, 1917, p. 1818).

Salvarsan, etc.—Besides the German salvarsan and neosalvarsan, now practically unobtainable, the Council on Pharmacy and Chemistry has recognized diarsenol, neodiarsenol and arsenobenzol (Dermatologic Research Laboratories). It has under consideration salvarsan made by the Farbwerke-Hoechst Company, New York. Before accepting these preparations, the Council requires evidence to show that the products are manufactured under supervision which may be expected to insure their chemical identity and uniformity, and freedom from toxicity. However, in the past, untoward effects have been reported from German salvarsan and neosalvarsan, particularly with the last shipments of neosalvarsan. Recently untoward effects have been reported from neodiarsenol. It is expected that with a short time all salvarsan, neosalvarsan and

the various products identical with these will be tested by the Government (*Jour. A. M. A.*, Nov. 24, 1917, p. 1819).

Ammonol.—The *New York Medical Journal* advertises Ammonol as "The Stimulant, Ethical Antipyretic and Analgesic." There we learn, in part, that this very ordinary mixture of acetanilid, ammonium carbonate and sodium bicarbonate is "a specific in Fevers, Neuralgia, Atonic Dyspepsia, Pneumonia, Gastralgia, Bronchitis, Coryza, Catarrhal Influenza, La Grippe, Rheumatism, Hysteria, Alcoholism, Amenorrhea, Dysmenorrhea, Uterine and Intestinal Colic, Obstinate Vomiting, Catarrh of the Bile Ducts and Jaundice." (*Jour. A.M.A.*, Sept. 22, 1917, p. 1010).

Fake Neosalvarsan.—The Department of Health of the City of New York has prepared a table whereby the spurious "neosalvarsan," recently located there may be identified. The department urges physicians to destroy all salvarsan and neosalvarsan containers after use of the drug, to prevent illegitimate use of these containers. (*Jour. A.M.A.*, Sept. 22, 1917, p. 1021).

Wheeler's Tissue Phosphates.—A leaflet devoted to the exploitation of Wheeler's Tissue Phosphates approvingly quotes the criticisms of the hypophosphites and the glycerophosphates by the *Journal A.M.A.* However, the leaflet fails to quote the *Journal's* estimate of the Tissue Phosphates" which was: "Wheeler's Tissue Phosphates' is an unscientific shotgun mixture whose most active and powerful drug is the alcohol it contains. That it was not years ago relegated to the realms of obsolete and discarded preparations in a commentary alike on the lack of scientific discrimination and on the power of advertising." (*Jour. A.M.A.*, Sept. 22, 1917, p. 1010.)

American-Made Synthetics.—The Council on Pharmacy and Chemistry announces that, with the aid of the A. M. A. Chemical Laboratory, it proposes to make a study of the quality of American-made synthetics. This control of synthetic drugs, which as a result of the war are now made in this country, is believed to be in the interest of the American industry, for the protection of the public and for the satisfaction of physicians. Since the manufacture of some of the synthetic drugs is to some extent experimental in this country, the Council feels confident that the responsible manufacturer will welcome this study as the best way of establishing complete confidence in his products. (*Jour. A.M.A.*, Sept. 22, 1917, p. 1018).

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVII

GRAND RAPIDS, MICHIGAN, FEBRUARY, 1918

No. 2

Original Articles

FRACTURES OF THE SKULL.

LEO JOHN DRETZKA, M.D.

Senior Surgeon, City of Detroit Receiving Hospital.

DETROIT, MICH.

During the period between October 15th, 1915, and December 1st, 1917, three hundred and ninety-six (396) patients with fractures of the skull were admitted into the Receiving Hospital. One hundred and eighty-six (186) of this number were transferred to other institutions within twelve hours after admittance. The mortality rate of the remaining two hundred and ten (210) cases was thirty per cent. (30%). One hundred and thirty-two (132) cases out of the two hundred and ten (210) required operative interference. From seventy to eighty per cent. (70-80%) of the fractures of the vault involved the base as well. Thirty-five per cent. (35%) of the three hundred and ninety-six (396) cases showed symptoms of alcoholic intoxication.

A fracture of the skull, more than any other traumatic injury requires the immediate, as well as constant, attention of the surgeon. The change from a state of consciousness to one of unconsciousness must be anticipated, for the patient may be admitted in a conscious state and in a very few hours after become unconscious.

Of first importance are the location of the lesion and determination of the extent of the intra-cranial damage (whether it is due to depressed fragments of bone, hemorrhage, edema or brain laceration).

SYMPTOMS.

- (a) The history, together with subjective and objective symptoms, indicates that injury in some degree is present. The body may or may not be in a state of shock, the patient conscious or unconscious.
- (b) Laceration of scalp with considerable hemorrhage may present itself.

- (c) The area of the vault may be depressed, fissured, indented or comminuted.
- (d) There may be bulging of the eyes, frequently one more pronounced than the other—eyelid ecchymosed—or the eye may appear normal.
- (e) The reaction of the pupils is important, both as a means of diagnosis and prognosis. Are the pupils equally dilated and do they react? Are they pin-pointed or widely dilated?
- (f) Bleeding from the ear is common, and there may be an escape of cerebro-spinal fluid or brain tissue. Bleeding may also occur from the nose, mouth, under the conjunctiva, or beneath the pharyngeal mucous membrane.
- (g) Temperature is usually elevated and in critical cases may reach 108 degrees.
- (h) The pulse may be either normal or rapid, directly after the accident, but with increasing intra-cranial pressure it falls continually lower and may reach 30.
- (i) Respiration may be either normal or rapid and if pressure increases it gradually becomes lessened and more labored and Cheyne-Stokes breathing finally appears.
- (j) Hemiplegia may be partial or complete, the facial form being the most frequent. There may be involuntary passage of urine and feces.
- (k) Reflexes may be exaggerated in the beginning then disappear entirely or become lost on one side.
- (l) There may be a general confusion which appears and disappears.
- (m) Blood pressure may be normal at first reading. The second reading only is of importance. Pressure reading should be taken at frequent intervals.
- (n) Spinal puncture reveals blood in basal fractures and may be used as a means to lessen pressure.
- (o) Choked disk is present when intra-cranial pressure exists and is a valuable sign.

FRACTURES OF THE BASE OF THE SKULL.

These fractures involve either the anterior, middle or posterior fossa or the entire base.

Symptoms manifested with fracture of the base are:

- (a) Hemorrhage of the orifices, namely, ears, mouth and nose.
- (b) Escape of cerebro-spinal fluid or brain tissues through the orifices.
- (c) Bulging of the eyeball due to intra-cranial pressure.
- (d) Subconjunctival hemorrhage and olfactory nerve involvement.

ders in diagnosis. A patient suffering with any one of the above conditions may have indulged in alcohol or received it as a stimulant before arriving at the hospital. There are many instances of patients being discharged by examining surgeons as alcoholics, or locked in police stations as "drunks" only to be discovered several hours later that he was suffering with a fractured skull.

Alcoholic Intoxication.—The breath may be that of an alcoholic; vomiting of undigested food is frequent; pupils commonly dilated and react; face flushed; coma not profound and



"H. C."—Extensive Multiple Fracture of Vault involving Left Frontal Parietal and Occipital region.

- (e) Pupillary reaction—either they do not react and are dilated, or one is dilated and the other contracted.
- (f) Pharyngeal hemorrhage is often evidenced as well as ecchymosis in the mastoid region.

DIFFERENTIAL DIAGNOSIS.

In the industrial and hospital practice, cases of unconsciousness, without a distinct history, are common. It is therefore necessary to distinguish the unconsciousness of brain injury from a comatose condition, which may result from alcoholic intoxication, apoplexy, epilepsy, uremia, hysteria, diabetes or opium poisoning.

The alcoholic breath has lead to many blun-

patient can be aroused by supra-orbital nerve pressure.

Apoplexy.—Hemiplegia exists; pupils usually dilated and inactive (they may be unequal); coma profound and patient cannot be roused; respirations are slow, noisy and accompanied by stertor.

Uremia.—Pupils not constant, general appearance suggests nephritis (this may be corroborated by an examination of the urine); paralysis and stertor are absent.

Opium Poisoning.—Pupils contracted, no paralysis, respirations are slow and quiet; patient may be aroused.

Diabetic Coma.—Pupils react slightly, ace-

tone breath, temperature subnormal, urinary examination characteristic.

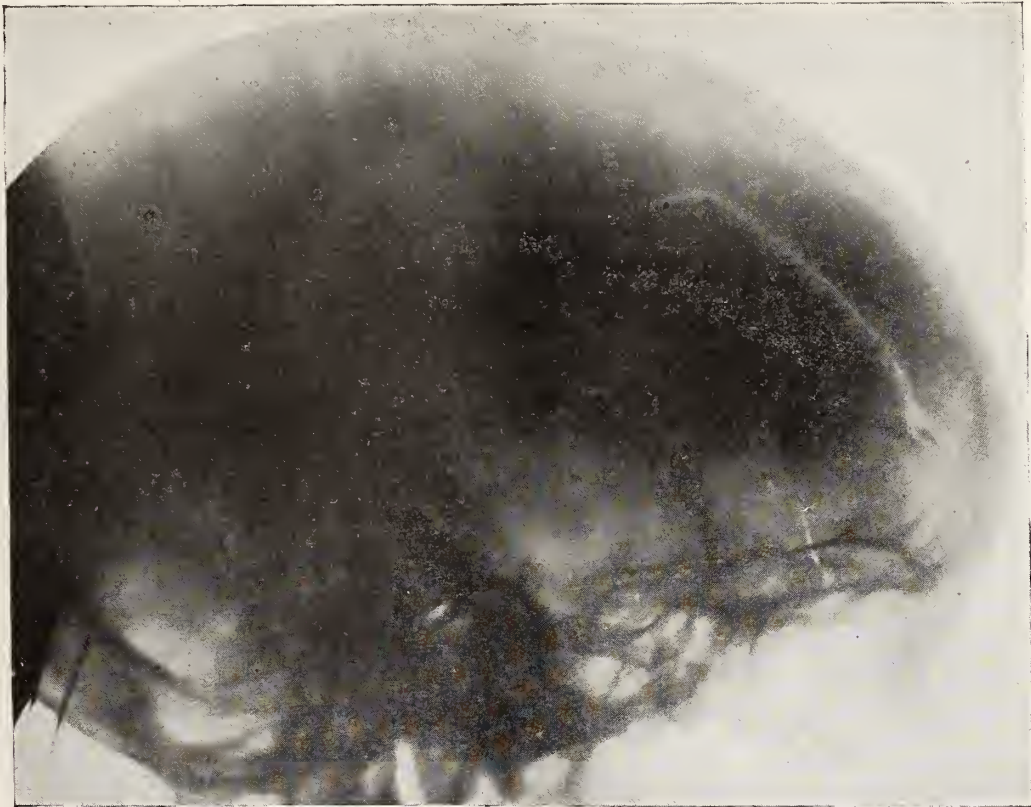
OPERATIVE TREATMENT.

Operative interference is imperative in all cases of depressed fractures, compound fractures, simple fractures with evident symptoms of hemorrhage or intra-cranial pressure, and basal fractures with symptoms of increasing pressure.

Technic.—The entire scalp is shaved and thoroughly cleansed; tincture of iodine applied, followed by alcohol; tourniquet then applied and

twenty-four hours. This condition is frequent in fractures which involve the vault and base.

The author has had several cases of meningeal hemorrhage with linear fracture extending into the lateral sinus. If the dura is intact and there is no pulsation, it is punctured to determine (if possible) the cause of pressure. Either sub-dural blood-clot or a stream of edema fluid will be disclosed and with the removal of clot or escape of edema, the pulsation will begin and often an immediate change in the condition of the patient is evidenced. If the dura is extensively lacerated and its edge



Case 2. "E. W."—Fracture of Vault Involvement of Right Fronto Parietal Region. (See Case Report No. 2.)

incision is made to expose area of depression. If depression is definitely localized and not extensive, linear incision will suffice; if not localized, the "U" horseshoe incision is employed. In many cases fragments of depressed bone may be elevated without trephining. If this is impossible, the trephine opening is made in the solid bone, its edge overlapping the fracture. If extra-dural clot is present, wipe away with moist sponges or a stream of salt water. If dura is lacerated, the underlying brain area is examined to detect bleeding points, which are ligated. In the event of blood welling up into the operative field from some part which cannot be reached with a ligature, the area is packed with gauze, which may be removed within

cannot be approximated, a fat or muscle implant may be resorted to. The meningeal region should be selected in cases of linear fractures with symptoms of hemorrhage or intra-cranial pressure; and in all basal fractures giving symptoms of increasing pressure, it is advisable to resort to the decompression operation.

NON-OPERATIVE TREATMENT.

The patient is put to bed, wrapped in warm blankets, ice-bags placed at the head and back of neck, an X-ray examination made as soon as possible, pulse, temperature, respiration and blood pressure noted at regular intervals; morphine sulphate administered only when patient

is extremely restless. (Urotropin 5 grs. every five hours).

LOCAL TREATMENT.

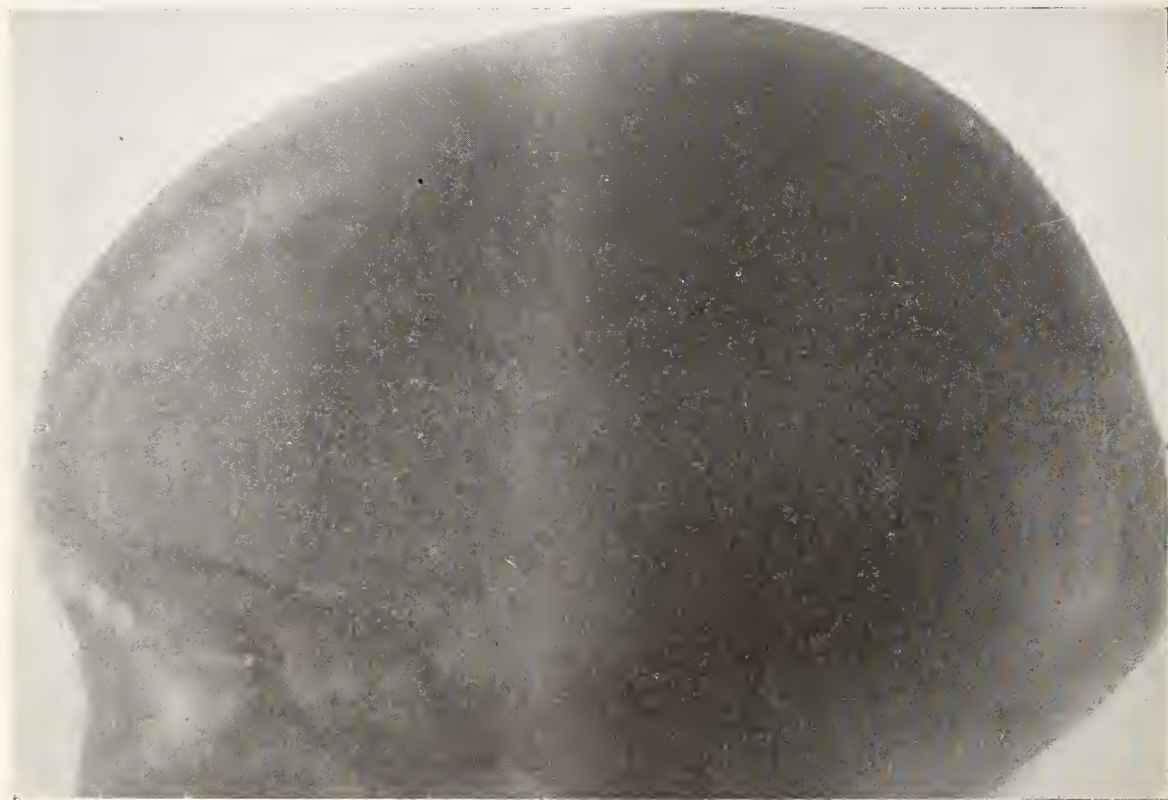
Scalp shaved in region of wound or hematoma, iodine applied and then a careful inspection of the skull made through open wounds, preferably the gloved finger inserted to explore the area. In doubtful cases the laceration should be enlarged or the hematoma incised; wounds drained and sutured with silk-worm gut.

(a) Nose should be carefully cleansed with

mobile while riding a motor-cycle, receiving injuries to the head and other parts of body.

Examination.—Extensive laceration on left side of face and scalp, extending through the temporal muscle; a linear fracture of the skull was palpated through laceration; wound was filled with small particles of dirt and gravel. There was a laceration of the left shoulder; fracture of tibia, upper third extending into knee joint. Patient unconscious and in a severe state of shock. Temperature 99, pulse 160 and very irregular; respiration 17.

Emergency treatment given and patient put to bed; an effort was then made to combat shock. Three hours later pulse dropped to 120 and patient reacted nicely, but shortly after this became extremely restless and noisy. Three days later patient was



Case 3. "M. R."—Fracture of Vault extending into base. Frontal Parietal and Temporal Involvement.
(See Case Report No. 3.)

boric acid solution, care being taken to prevent sneezing.

(b) Ear should be cleansed with boric solution and after it is dry, boric powder gently blown into the auditory meatus. When there is free bleeding, the meatus may be loosely packed with gauze. Care should be taken, however, not to stop the bleeding entirely with the pack.

It is important that much attention be directed to the nose, ears and mouth. "

CASE REPORTS.

CASE No. 1. D. L. Female. Age 21 years. Admitted Sept. 9th, 1916. Patient was struck by auto-

removed to another hospital contrary to advice. While there she went violently insane and became uncontrollable. Was returned to the Receiving Hospital on Sept. 18th. It was found upon examination that the patient was suffering from acute traumatic mania. Facial laceration was infected but this cleared up in twelve days and on October 5th we operated.

Diagnosis.—Intracranial pressure, resulting from skull fracture.

Operative Technic.—Excision of facial scar, elliptical incision made; linear fracture had united; the area over the middle meningeal artery was then trephined and the opening enlarged. There was no brain pulsation visible so the dura was incised and a gelatinous substance disclosed. When this was gently removed, it was followed by a stream of edema. Forcible brain pulsation began immediately. The dura was then sutured and the scalp

closed. Patient returned to bed in good condition but was restless and noisy for several hours after reacting. Signs of returning rationality forty-eight hours later. On the fourth day patient was able to recognize her mother for the first time since the day on which the accident occurred. Twelve days later patient had made a perfect recovery from the skull operation and was walking about with the aid of crutches. She was discharged from the hospital November 18th, 1916, and has reported to me every six months since leaving. She is in excellent health.

CASE No. 2. Female. Age 25. Admitted October 2nd, 1917. Victim of assault.

Examination.—Patient in an unconscious state with several lacerations of the scalp. Upon retracting laceration in right temporal region, a fragment of bone depressing the dura was visible. This was removed with forceps. There was bleeding from the mouth, nose and right ear; pupils were equal and reacted to light. Temperature 96, pulse 110, respiration 30. Patient very restless and noisy. Three hours after admission she began to show signs of returning consciousness, and at the end of twelve hours bleeding from the orifices had stopped.

Diagnosis.—X-ray examination showed extensive fracture of the right fronto temporal and the left frontal region.

Treatment.—No operation; urotropin every four hours; antiseptic treatment of orifices; ice-bags to head; patient showed continued improvement. Temperature rose from subnormal to normal; pulse dropped to eighty and signs of consciousness appeared. Patient was removed to a private hospital on the sixth day regaining complete consciousness on the following day. Patient called on me November 24th, apparently in perfect health and has resumed her occupation as seamstress. A depression can be palpated in the right temporal region but this will probably not cause her any trouble.

CASE No. 3. M. R. Female. Age 30. Admitted October 28th, 1917, thirty minutes after she received injury to the head.

Examination.—Patient very noisy, restless and irrational. Ecchymosis of right eye and large hematoma in parietal region through which depression can be felt. Pupils widely dilated and equal—bleeding from the nose. Temperature 99, pulse 102, respiration 24, blood pressure systolic 122, diastolic 80. Patient put to bed with ice-bags to head. Nose, ears and mouth treated antiseptically. Restlessness increased and patient began vomiting blood. Right pupil more dilated than the left and respiration became more labored. Signs of facial paralysis were present.

X-ray Examination.—Comminuted depressed fracture of right fronto-temporal region—linear fracture extending into base of the skull.

Diagnosis.—Fracture of vault extending into base. Intra-cranial hemorrhage causing increasing pressure.

Operative Technic.—Under ether anesthesia a straight line incision was made on right side over the region of the middle meningeal artery. Edge when retracted disclosed a comminuted fracture, slightly depressed. Button of bone removed with

trephine and active bleeding from posterior branch of middle meningeal artery was found. This was controlled by five catgut ligature. No brain pulsation present. Dura was punctured and edema spurted forth with great force. Brain pulsations began at once. A wide rubber drain was inserted and the wound closed. Patient returned to bed in good condition. Twelve hours following operation was in a restless condition. She was fairly quiet during the night and the following day appeared quite rational. Recognized relatives and surroundings. On the fourth day was entirely rational and improving steadily. Facial paralysis and diplopia present until the tenth day, then began to disappear. Patient complained of dull headaches which gradually became less severe. Discharged thirteen days after operation.

CASE No. 4. W. C. Male. Age 50 years. Admitted January 22nd, 1916. Was struck by a motor-car while intoxicated.

Examination.—Showed patient in a semi-conscious condition; bleeding from left ear; pupils equal; reflexes sluggish; a small laceration of the scalp posteriorly.

X-ray examination disclosed a fracture extending from occipital protuberance to the left auditory meatus.

The second day after admittance, patient became irrational, extremely restless, and showed signs of increased pressure.

Operative Technic.—Elliptical incision to expose fracture. No depression present. Trephined area enlarged; subdural clot found and gently removed, when stream of blood welled up from region of lateral sinus. This was controlled by packing with hydroscopic gauze. Scalp then closed and gauze pack was removed in forty-eight hours.

Patient left hospital four weeks later, having made an uneventful recovery.

In a letter from his son I am informed that the patient returned to his former occupation of bricklayer, but suffered from occasional dizzy spells, so was compelled to seek lighter work occasionally.

CASE No. 5. J. M. Male. Age 31 years. Admitted October 16th, 1915. While looking over the side of a rapidly moving motor-car patient's head was smashed against a telegraph pole.

Examination.—Patient unconscious and bleeding freely from an extensive laceration over left eyebrow. There was a depressed fracture in the left frontal parietal region, extending through the orbit and the eye-ball was lacerated. Temperature 97, pulse 84. Immediate operation.

Operative Technic.—Elliptical incision on left side over depression; small triangular fragment of bone removed. Frontal cerebral lobe was severely lacerated, allowing about a tablespoonful of brain substance to escape. Bleeding vessels ligated; depressed bones elevated and wound closed with drainage.

Upon reacting from the operation patient became restless and irrational. Pulse rose to 104, temperature 101. Six days later patient regained consciousness. His injured eye-ball was enucleated eight days later and at the end of four weeks patient was discharged from hospital. He reported to me one year later in good condition.

CASE No. 6. Age 50 years. Admitted September 3rd, 1917. Was struck by motor-car while in an intoxicated condition.

Examination.—Showed patient conscious and with a slight scalp wound, which he refused to have treated. The remainder of the examination negative but the history of the fall induced the examining surgeon to request the patient to enter the ward for X-ray examination. This he also refused to do, and he signed the hospital release form. He was admonished to place himself under the care of his family physician immediately. Twenty-four hours later he was readmitted into the hospital in an unconscious condition; his pupils unequal, pulse 40, respiration stertorus and death followed shortly.

Postmortem Finding.—Linear non-depressed fracture in temporal parietal region. Extra dural clot weighing four ounces was removed. A rupture of middle meningeal artery—no subdural clot.

THE FUTURE OF MEDICINE.*

W. H. SMITH, M.D., PH.D.

ST. CLAIR, MICH.

The world moves in a higher and larger sense than that of which the old Florentine philosopher ever dreamed. When Burgoyne surrendered Oct. 17, 1777, the news did not reach England until the second day of December. Now the things that happened in China this morning we discussed at the breakfast table. On his voyage of discovery Columbus sailed August 3, 1492 from Palos, Spain, and landed in the new world at San Salvador October 12. Now we cross the ocean in a few days. Steam and electricity have annihilated distance and brought the world together. They have made this earth of ours small and brought us into intimate relationship not only with the people of our own but of every land.

Not only has the globe on which we live been made small but our manner of life has undergone a wonderful transformation. Formerly all work was done by hand, now it is largely done by machinery. The laborer once owned the tools with which he worked; today they are parts of a machine, too large for him to own. He is dependent upon the use of that machine to supply his bodily needs, and hence the man or combination of men who own the machine practically own him. He must do as they want him to or take the chance of starvation, and hunger or the fear of it will drive a man to work and obedience more readily than the lash ever drove a slave in the world's history.

Poets have dreamed of a day when men shall be relieved of the burden of work. It looks as if we might be approaching that day. Gladstone declared "that by the aid of machinery the manufacturing power of the world doubles every seven years." However, John Stuart Mill says "It is questionable if all the mechanical inventions yet made have lightened the day's toil of any human being." In fact it seems to have had the opposite effect by rendering his job and hence his means of livelihood more insecure, as a machine may be invented tomorrow to take his place. The man who has trained himself

in one line of work and acquired skill in it may not when advanced in years be able to learn another, even if he could be certain of finding one. The way our race has dealt with machinery adapted to relieve humanity of the drudgery of work is a sad commentary on the intelligence or barbarity of men. Abbe Lancellotti in a work written in 1579 says, "Anthony Mueller of Dantzic, saw about fifty years ago in that town, a very ingenious machine, which weaves four to six pieces at once. But the Mayor apprehensive that this invention might throw a large number of workmen upon the streets, caused the inventor to be secretly strangled or drowned."

The destruction of machinery by laborers gave the name Luddite movement a place in history. Nor can we judge them for this act of folly too harshly, as the way the race has taken and used machinery has often had the effect of turning men out of work to starve. "History disclosed no tragedy more horrible than the gradual extinction of the English hand-loom weavers, an extinction that was spread over several decades, and finally sealed in 1838. Many of them died of starvation, many with families vegetated for a long time on 2½ pence a day." Of the introduction of such machinery into India the Governor-General reported 1834-1835, "The misery hardly finds a parallel in the history of commerce. The bones of the cotton weavers are bleaching the plains of India."

The evolution of industry has passed through three distinct stages. First the hand-craft epoch, second the machine age and last that of the factory system. With the coming of the factory system women and children were employed. Parents often sold their children and from the English alms-houses it was customary to sell the little ones as factory slaves. The beds in these slave-pens were not allowed to get cold, one set of children going into them as another came out. Children with lacerated fingers, inflamed joints and aching bodies were beaten out of their beds half-asleep, kicked, cuffed and driven to work by brutal overseers. As a result of neglect, bad food, over-fatigue and poisonous air they died in appalling numbers, and the mothers taken from their homes to toil all day were unfitted for maternal duties. Against such a condition the leaders of the medical profession, true to their traditions of safeguarding human life, were found in protest. Medical men either led the movement against this menace to the human race or the men who did had gathered their inspiration from the teaching of our profession as to the cause of disease. Today we are not leaving our factories to unbridled greed, but are insisting that they shall be sanitary places and that the lives of those who work in them shall be made reasonably safe from the risk of accident or the contraction of disease. Out of this has grown a new branch of our profession, that of industrial medicine with new lines for study such as occupational diseases.

Some day we shall go still further and insist that children shall not be employed in gainful occupations, but kept in school, and that mothers shall not be allowed in factories, but be supported at home so as to give their children proper care, and that when in the progress of the race, the invention and installation of new machinery displaces men from their life-work society, which is to profit by the

*Read before the St. Clair County Medical Society, Dec. 13, 1917.

invention, shall not turn such men out to perhaps starve, but shall be obligated to find them another job or if that is impossible to provide some means for their support.

With the evolution of the factory system came the herding of men into those sources of so much insanitation and unnatural life, the cities. As the development of industry had created a whole line of health impairments, so the changed mode of life in the cities has given rise to abnormal living conditions with bad housing, rotten tenements, sweatshops, ill-ventilated work shops, improperly-lighted school houses, poverty, alcoholism, venereal diseases, want of proper play grounds for children, rotten foods, polluted milk and water, and delinquency and crime. Out of such conditions developed an appalling list of disease and death, so that men, women and children died like flies in autumn.

While others stood helpless before this awful fatality medical men organized boards of health and set themselves earnestly at work to discover the cause and so well have they succeeded that today life is as safe in our cities as in the rural districts. This is due to the efficient health service being so much better in the urban than in the villages and rural districts. In this is found another of the advances of medicine. While our profession almost alone profits by having people sick, yet to the crowning glory of medicine, it must be said that our profession has taught the world all its sanitation. We alone as a profession have taught people how to prevent disease.

The contrast between the ethics of our profession and that of the world around us is marked. A man in another calling makes a discovery. He patents it in order to make money for himself, but the ethics of our profession says he must give that to the world without recompense for the benefit of suffering humanity. A man in another vocation loves to see his name in the papers and to occupy the seats of honor, while ours forbids a man to have his name in the paper for any meritorious treatment or operation, save a simple card announcing his business. A man employs us to cure him when sick and then the longer he remains sick the more he expects to pay, that is he hires the doctor to get him well and then pays the physician to keep him sick, a stupid transaction on his part. His only safety under such a system is the ethics of the medical profession which says that a man low enough to keep a patient sick for the sake of the increased fees is unfit for membership in any medical society. Why, if our profession had no higher ethics than those of the business world no sick person would ever be allowed to get well while he had a dollar left that we could extort from him.

Someday the people will become too intelligent to keep up this absurd system and they will hire doctors and pay them a good salary to keep people well rather than to cure them after they become sick. In other words the future of our profession will be in the line of preventive medicine rather than as now curative and we should see this and lead the way to it. Our profession has given the world all its sanitary knowledge and we must continue to lead the movements for safeguarding the public health or see our places taken as public leaders by the sanitary engineers who will do the work if we fail and be given the offices and the honor that justly

belongs to the medical profession. We cannot stop. We have gone too far and must go forward or see our places taken by those who will.

The medical profession has given the world its grandest lessons in heroism. The speaker has seen soldiers stand unmoved like a rock before blazing cannon and volleys of musketry, and the same men blanch and whiten when required to enter a small-pox pest house. Some of you will remember when the yellow fever raged in the South and relatives forsook their dependents and fled for safety, yet the heroic doctors stayed at their posts. Nay, more young men from the North, who had received medical education and knew it was almost certain death for them to venture into that fever-infested zone, left home and friends and went South, hoping to save some before they themselves fell martyrs to the disease.

Time would fail me should I attempt to enumerate the quiet, unostentatious heroes of medicine who, by experiments upon their own bodies, have paid with their lives for their efforts to discover the causes of diseases. Thanks to the sublime courage of medical men in daring to thus risk and often lose their lives, we know today the causes of diseases that were once baffling, and hence how to avoid or eradicate them. The building of the Panama canal is probably the most wonderful achievement of this wonderful age in the industrial world, and yet the building of that canal was only rendered possible by the martyrs of medicine who dared expose themselves to and contract such diseases as malarial and yellow fever in order to discover their cause in the fever-disseminating mosquitoes and thus provide the race with the means for their abolition. The medical profession has a long list of names of men who were willing to die to make the future of humanity better than its past by supplying us with the means for the eradication of disease.

Three and a half years ago a few war-mad maniacs plunged the world into a cyclone of destruction. The choicest works of the ages were ruthlessly destroyed, men were butchered in a holocaust of blood, other professions, like the chemists and engineers, marshalled their resources to make the world a charnel house and lead it back towards barbarism. In this wild orgy of destruction and atavism to savagery our profession alone has remained constructive and faithful to those ideals that conduce to the race advancement. No discovery of ours has been prostituted to the work of slaughtering men or debauching women and children, but with a heroism surpassed by none our men have been at the front not to take life, but to save it. Medical men have been upon every battle-field of the war, far to the front, to alleviate the suffering of the dying, to rescue the wounded, and to bind up and repair as far as possible the injuries which war has caused. Our profession love humanity and have kept their hearts so free from the bitterness and animosity around them that they are as ready to care for a wounded and suffering German as for a wounded Frenchman and for a wounded Austrian with the same zeal to save his life that they would a wounded American.

True most of us recognize that Germany is to blame for this war and that its cause is to be found in the desire of her ruling class for world dominion and supremacy in trade. We also recognize that no

greater calamity to the world could happen than for Germany with her feudalistic government and disregard of her plighted faith to win. This would mean the turning of the world backward, worse if anything could be than the horrors of war. Still with hearts untainted with bitterness, we are ever ready to minister to her children, for wherever there is suffering humanity there is our mission to relieve, to comfort and to bless. This spirit alone fits our profession to play a prominent part in leading the world back to sanity after the present mad orgy of blood shall have passed away.

That we love our country and desire to see her win goes without question. Rather as a profession we have shown that by lives of social service. Our profession has ever striven to make our country the cleanest and best country in the world in which to live. This is a patriotism higher than that of the battle-field, and our profession has shown it by waging an unceasing war against those arch-enemies of the human race—diseases of every kind.

In this warfare we shall continue and never ground arms until our country is purged of every disease and every man, woman and child in it has the right to live a complete human life without apprehension of premature death, because our country shall have been made so clean and sanitary that it will be impossible for disease to gain a foothold in our midst.

In our mission we have been waging the holiest war in which men were ever called to battle. We have met and vanquished the superstitions of the past and given the world its true theology. We have taught men that nature's laws are God's laws, and the eternal habits of deity, that they are unvarying because God is unchangeable, and that to be co-partners with him we must learn his laws and work in accordance with them. We build a canal connecting two oceans, tunnel a mountain or bridge a river, but in this we have contravened no natural law, but simply worked in accordance with God's law of gravitation. We can graft a greening upon a crab apple and produce greenings because we understand the laws of growth. Men have learned to navigate the ether above us in aeroplanes and "greyhounds of the air," because they understand the laws of flight. In the same way we meet and overcome disease by investigating and discovering the laws governing its action. No intelligent man today would assert that disease was sent to the world as a punishment by an offended deity, but it is recognized as a result of violated cosmic law under which we live and which we must observe to be healthy, and this great change in theological thought the world owes to the researches of medical men.

It is evident that the more of these natural laws we know and obey the larger and truer will be our conception of deity, the safer our position, and the broader our liberty and relationships in life. The savage knows but few and is limited in his intercourse with his fellows. He can talk with those close at hand or halloo at a limited distance, but the civilized men by means of a wire can speak at long distance, or by the Hertz' waves dispense with the wire and still send his thoughts over mountains and across vast expanses of water.

Even so it is in dealing with disease. The more knowledge we have of its cause, action and manner of development, the better equipped we are to grapple with and overcome it. In this, however, is a danger, the danger that some men in our profession should make a fetish of disease and dance around it, that is simply to study it with the aim of treating it rather than how to avoid it. We should ever remember that the highest and best part of our profession is preventive medicine, and if we must have a fetish, it should be health and how to preserve it, rather than disease.

Incidentally the ethics of our profession is a standing refutation of the vile slander upon the human race that men will not work unless paid for it in money. The man who will use this statement shows his narrowness and littleness of mind. If a good observer of humanity he would find them swayed by a multiplicity of motives. No one pays women in money to keep virtuous and men often take public offices at a financial loss, or do countless other things without hope of reward beyond the approval of their own conscience and here is a whole profession whose best work is done not for a money reward, but against it for the benefit of humanity.

The war has already removed the worst anomaly of our profession. Hitherto venereal diseases have been regarded as diseases of shame and to be treated secretly, but so many of the young men called to the colors have been found unfit on their account that the Federal government and states have joined hands for their extirpation and today gonorrhea and syphilis are made reportable to the State Board of Health and the source of their contraction so that their spread may be prevented. This is a fine movement in the right direction, as it means that the sanitary handling of these diseases are no longer to be left to a lot of well-meaning cranks, who have been accustomed to overlook the male prostitute while dealing with the female, but the problem of prostitution and its evils turned over to the level-headed men of the medical profession. Thus has auspiciously started another movement destined not to stop until these scourges of humanity are as completely robbed of their power as have been the plagues of the past.

Another thing the war has brought home to us. It is that success in war is largely a matter of industrial efficiency at home. This has an important bearing upon the medicine of today and will have a still more important one in deciding the medicine of the future. This means that our medical or health work is going to take on a new form. Instead of simply saving life and estimating the result by the numbers saved, it will look to the safeguarding of the efficiency of the workers. The country, the state, and the manufacturing plant are poorer by every day lost unnecessarily and also by a workman who can only do part of what he ought. From this it follows that industrial medicine is destined to have a much larger development and many in our profession will be called upon to diagnose and treat the causes of industrial inefficiency. Even beyond that we shall go and learn to recognize and abolish these causes. This means a large development of group medicine with a dispensary in every plant, because manufacturers will learn that they can no more afford to have inefficient workmen than

the nation can afford to have inefficient soldiers in its army.

The way of regarding disease has changed markedly since I was a boy. Then disease was regarded as individualistic, now it is looked upon as communal or social. This was never quite true as disease was always more or less of a social nature and it is still more so today. A physician who would give a disease a name and treat the name would now be far from doing justice to his patient. Rather he should make a social diagnosis and find out what is wrong in society, that is to say in the housing conditions of his patient, his or her food or the conditions under which he or she works. The proper treatment of the case may require a visit to the employer to have the conditions of labor improved or to a landlord to have housing conditions corrected.

Instead of being individualistic disease is more frequently due to society's mistakes or crimes, as when a city pumps diluted sewage to its people for drinking purposes, or allows them to be poisoned by rotten food or contaminated milk. In various other ways disease shows its social character and this suggests that the medical practice of the future will be social to conform to the character of the diseases. Also it will be vastly extended to meet the new demands, but with the view of keeping men well rather than curing them after they become sick. This will occur because society will some day become intelligent enough to know that disease is waste and loss and it is more profitable to prevent than to cure it.

The time is assuredly coming when we shall have a secretary of health as a member of the President's cabinet and he will be the most important member of that cabinet, because he will be called upon to care for the most important interests the people have, their lives, their health, their efficiency.

In the time when people awake to their truest interests we shall not only have medical inspection in all our schools, but medical teaching in the schools of matters pertaining to health. Some day we, who have taught the world the relationship between poverty and disease and crime, may be called upon to prescribe a remedy for and cure poverty. We have also shown that there is a relationship between wages and disease and death. Our government's researches at Johnston, Pa., showed that 200 children out of every 1,000 died where the father's wages were less than \$10 a week, while the infant mortality was about 80 in families where the income was \$25 or more a week. This indicates that the medicine of the future will concern itself with wages as probably it will with poverty.

All men need clothing, shelter, fuel and food. The consequence of not having these properly supplied is often paid in disease and death. Hence the medical practice of the future is likely to be potent in insisting on the sanitary handling of our resources. Hitherto this has not been done. The Creator put here timber enough to have lasted the world for a thousand years, and so ruthlessly have we allowed its destruction by unbridled greed that today there is a shortage of timber. A sanitary handling would have allowed its use as needed, but prevented the waste.

Chief among the national resources demanding sanitary treatment is the land and the use we make of it. Buckle in his *History of Civilization* has

shown us the potency of a rich soil and rice in developing the civilization of India, how dates and a soil whose fertility was maintained by the annual overflow of the Nile was responsible for that of Egypt, how maize and a rich soil produced a like result in Mexico under the Montezumas and the part played by the potato and a fertile soil in the Inca civilization in Peru, and how the centralization of wealth in the hands of the few was responsible for caste and class distinction and the overturning of those civilizations.

With this importance of the soil in civilization how necessary is its sanitary treatment and yet what do we see? Lands impoverished by overcropping, or excessive sameness in cropping; farms prematurely worn out and abandoned like some in New England; often a neglect of fertilization; diminishing returns for agricultural labor with men fleeing from the worn-out soil to the wilderness to repeat the same process, or to the cities. These matters concern us as diminishing returns for labor on the farm as in other industries mean lower standards of living with its concomitants of disease, vice and crime, and the medicine of the future will insist that the lands shall not be left to the haphazard methods of today, but shall be sanitarily handled so that their use or abuse, call it which you will, shall not lead to their impoverishment, but rather to their continual enrichment so that they will become more and more productive from age to age.

As the world grows older new and larger problems will come to the race. In their solution the medicine of the future will play a prominent part. This is because our training as physicians has fitted us for it. Bigotry has no place in our profession. We must be ever ready to discard the belief of yesterday for the discovered truth of today and the man whose mind is not open enough to do that should be in the graveyard. At least he has no place in the medical profession. Again medical men by their training as students and discoverers of nature's laws and guidance by them have the habits of mind and education that adapt them to become the discoverers of social laws and to prescribe the remedies for the evils in our social and political life. Still farther, our profession having maintained its ethics of service to humanity, undebauched in this age of greed, is alone fitted to grapple with and solve such problems on the basis of equity and justice. Either their solution must come from us, or from men who have gathered their inspiration from us, and adopted our ethics and methods of research. Thus from medical men, who gave the world its freedom from the plagues and pestilences of the past, must come, directly or indirectly, the remedies for the plagues and pestilences that vex and threaten the destruction of our individual, social, industrial and political life.

Possibly even in the near future our military friends may feel constrained to call upon us to teach them how to prepare for war. Last spring our government realizing the important part food-stuffs were to play in war urged those of our people who had yards to convert them into gardens so as to raise as much food as possible and our women to abolish the waste so often seen in our kitchen. This was good advice and worthy of being heeded, but those of you who have been much above Bay City the past summer have ridden for miles and

miles through land lying absolutely idle. Speculators secured this land, stripped it of its timber and have since held it at a price that has prevented people getting and using it for homes. There are also vast tracts of land, thus held idle in other states, especially in the West. This waste of our resources should not have been allowed. In view of the necessity of food for war purposes such lands should have been conscripted and used.

A good method of handling them would have been when our government drafted men for service to have kept all in the service, separated out the unfit and placed them under officers who knew how to farm and detailed them to work these lands. Then the farms should have been divided into districts or groups and a medical man too old for service at the front assigned to each group charged with the duty of looking after the sanitation of the farms and health of the men. Had this been done three-fourths of these men could have been made fit for soldiers by fall and we could have raised on the lands, which have been allowed to lie idle in this country, foodstuffs enough to have supplied the world and still had a surplus for future use. No nation can do what it is capable of in war which allows its unfit men to remain unfit or allows its resources to be wasted, but to do its best must mobilize all its resources, both of men and of property, and use them in the most efficient possible manner.

The past winter the speaker attended a hearing before a senate and house committee of the Michigan legislature on the question of continuing the appropriation to continue the warfare so well begun in our state against tuberculosis. The next day in private conversation a member of the legislature said to me "To tell you the truth, doctor, I think that there would be a better chance to get from this legislature an appropriation to combat a disease of hogs than one to combat a disease of human beings." What a low standard was this for men chosen to represent a great state? With such a low standard medical men have a mission to perform, that of disinfecting the human mind and purging it of its low ideals until never again will the voters elect men to represent them that will place a higher value upon hogs than they do upon the most priceless possession any state can have—its men, women and children.

In our mission to eradicate disease and purge humanity of its low ideals we are receiving valuable assistance from the best men and women in other callings. Such are our antituberculosis societies, the Red Cross and nurses' work, the little mother classes in many of our cities, the child welfare work of our national government presided over by Julia C. Lathrop, the eugenic societies asserting the right of every child to be well-born, the manufacturers who have learned they cannot afford to have their employes ill and hence are supporting industrial medicine and are ready to pay for efficient health service, and numerous others.

Every one is familiar with the splendid work the Metropolitan Life Insurance Company is doing in caring for its policy holders because it has found it cheaper to care for the health and lives of those whom it insures than it is to pay death claims. Other insurance companies are finding the same fact and

in short all the signs of the time indicate that humanity is awaking to the fact that health has a money value and that the future treatment of disease will be preventive and more and more communal. In this great advance of humanity the medical profession will continue to lead until this earth redeemed and freed from ignorance, greed, vice, crime and disease shall be as the new Jerusalem which John saw in prophetic vision in which there shall be no more pain, neither sorrow nor crying, for the former things, which made for evil to the race and prevented its progress, shall have passed away.

DATA OBTAINED FROM THE OBSERVATION OF FIVE HUNDRED AND THIRTY-ONE CASES, WITH REFERENCE TO ETIOLOGY OF THYROID HYPERPLASIA.

BLANCH N. EPLER, M.D.

KALAMAZOO, MICH.

In the examination of 2,000 students of the Physical Education Department of a Normal School in Southern Michigan, since 1914 I noted that in about 85 per cent., enlarged thyroids presented—the ages averaged 19 but extended from 16 to 30 years.

Several years ago the *British Medical Journal* presented the result of work done on the etiology of goitre and showed that organism of the colon group obtained from the water of the depressed areas in hilly or mountainous districts, a so termed concentrated water, caused thyroid overgrowths.

Switzerland is the country notable for the frequency of goitre—Michigan ranks close in the prominence of its enlarged thyroids.

The marked distribution of thyroid hyperplasia—the picture in infectious diseases of the lymphoid system and the thyroid—the results of the English work, led me to realize that there might be found in the details concerning some of these enlarged thyroid cases under my observation valuable factors and suggestions bearing on the problem of etiology.

With this in mind, I considered some 500 cases and present the data—having in mind the possible infectious nature, direct or indirect, of the hyperplasia.

The students at the State Normal School in Kalamazoo come largely from small towns and rural districts in Southern and Central Michigan and the school conditions have no bearing upon my findings.

I have, in a data obtained about the 500 girls, noted the character of the source of each water

supply—living locality and birth place, contagious diseases, especially tonsillitis and a few other points. In addition, some 250 children (boys and girls) in the Training School of the Normal were observed for similar points.

Too large a number of these children showed heart murmurs; the majority a beginning scoliosis and many uncared for teeth and gums, though coming mostly from well-to-do families. Most of the older students examined presented slight acne vulgaris and obstipation or constipation.

No. observed in the 1st series	535
No. enlarged thyroids found	405
No. exophthalmic goitre	2
No. addressed as to	
1. Water supply and	
2. Contageous diseases	323
No. drinking well water in rural districts..	153
No. drinking city water (largely obtained from driven wells)	126
No. drinking spring water	31
No. drinking lake water	13
(No. from Kalamazoo	44)
(No. from Kalamazoo County	8)

As to the contagious diseases.

No having had 3 or more contagious diseases	94
No. having had tonsillitis	45
No. having had enlarged glands	4
No. having had typhoid	18
No. having had diphtheria	6
No. having had nasal or sinus infection	3
No. having had pyorrhoea	11
No. having had arthritis (acute)	1
No. having had anterior poliomyelitis	1
No. having had small-pox	2

As to those having had three or four contagious diseases but showing no enlarged thyroid—a small group were noted.

No. having had 6 diseases	3
No. having had 5 diseases	5
No. having had 4 diseases	9
No. having had 3 diseases	13
No. having had 2 diseases	2

The following counties were represented in the 405 cases:

Allegan	5	Kalamazoo	93
Benzie	1	Jackson	3
Berrien	9	Lenawee	1
Branch	4	Macosta	12
Barry	6	Muskegon	5
Cass	4	Manistee	3
Calhoun	14	Newaygo	1
Charlevoix	1	Menominee	1
Dickinson	1	Oakland	1
Eaton	1	Ottawa	8
Genesee	2	Oceana	3
Gratiot	5	St. Joseph	15
Grand Traverse	5	Saginaw	1
Houghton	10	Wayne	1
Ionia	3	Washtenaw	1
Ingham	2	Wexford	1
Kent	23	Van Buren	30

A second series of cases of students residing in Kalamazoo drinking city water (driven wells) were as follows:

No. of cases of enlarged thyroids	90
Larger than normal—full	54
Large	36
Born and living in Kalamazoo	41
Born and living in Kalamazoo County	7
Born in Michigan out of Kalamazoo	39
Born in other states	12

A third series observed were of 250 children in the Normal Training. These, as before remarked, were mostly of good families—mostly born in Kalamazoo and a fair number showed heart murmurs and scoliosis; while poor teeth and gums were not infrequent.

No. examined	244
No. enlarged thyroid	37
No. in kindergärten, with enlarged thyroids	2
No. with enlarged thyroid in 1st grade	6
No. with enlarged thyroid in 3rd grade	4
No. with enlarged thyroid in 4th grade	7
No. with enlarged thyroid in 5th grade	1
No. with enlarged thyroid in 6th grade	4
No. with enlarged thyroid in 7th grade	6
No. with enlarged thyroid in 8th grade	7
No. of boys with enlarged thyroid	12
No. of girls with enlarged thyroid	25
No. with enlarged cervical glands and enlarged tonsils	17
No. with enlarged tonsils	9
No. with enlarged glands	5
No. with neither enlarged glands nor tonsils	8
No. having had chicken pox	4
No. having had chicken pox and measles ...	14
No. having had chicken pox, measles and pertussis	8
No. having had chicken pox, measles and scarlet fever	1
No. having had 3 or more contagious diseases	11

Michigan is a hilly rugged state—dotted with innumerable small lakes connected with underground springs—and traversed with glacial markings.

Most of the cases had had some contagious disease—showed slight acne vulgaris and obstipation or constipation.

Pupils coming from other states rarely presented an enlarge thyroid and in fact a normal thyroid led me to ask as to what state they came from.

TICS OR HABIT SPASM.*

DAVID INGLIS, M.D.

DETROIT, MICH.

The name often used "Habit Chorea" is a misnomer; it is not at all a chorea but a "Habit Spasm." I am led to give this paper, because it comes to me, that, by many, the affection is regarded as practically incurable. This is not true.

When a flock of sheep is turned into a new hillside pasture, they can and do wander about, in every conceivable direction. but, in a few days, it will be found that they have worn a number of sheep tracks and that, thereafter, on their longer strays, the sheep follow these tracks, until they become deep depressions, in the turf. *They have found paths of greatest ease and least resistance.*

To a large degree, education of the mind, depends upon the opening up of cerebral sheep tracks or paths of greatest ease and least resistance.

The mass of white brain substance greatly exceeds the amount of gray, cellular substance. It all consists of conducting fibres. An immense area, to be used as possible sheep tracks. Paths of greatest ease and least resistance. Medulated nerve fibres, connecting wires, making possible infinite modes of easy communication, between cells of the most diverse functions.

All kinds of connections are conceivably possible but in even the most skillful, most variously educated mind, the probability is, that many are never used, many used only occasionally and with difficulty and relatively few used easily, freely and often.

My neighbor had two thousand hens, in a large number of colony houses. A tornado, one Sunday afternoon, tumbled the houses about and the air was filled with fluttering hens. He fully expected that every hen would be carried out upon the nearby Detroit river. To his surprise, every hen suddenly disappeared and he found them all, squatting upon the ground, with their beaks on the ground and headed into the wind, in such a manner that the pressure of the wind flattened them hard to the ground.

Not a hen but knew the trick!

Now a hen, with reference to an automobile,

is remarkably stupid, but countless generations ago the ancestors of the hens, in Asia, had learned to manage themselves in typhoons from the Indian Ocean.

Instinct is hereditary intelligence. It is instructive that there are already evidences that hens are becoming more rational, with reference to automobiles. In time they will transmit a new instinct, to unborn chicks.

Will establish new paths of greatest ease and least resistance, of hereditary sort.

We must conceive that the young of a species bring their outfits of well opened sheep tracks at birth, that others are very early developed. Occasionally, individuals thus develop certain peculiar aptitudes, certain cerebral sheep tracks not usually formed, such as those persons in whom sounds have their appropriate colors or certain persons seem to them to be associated with individual colors. An instance of the infinite possibility of tracks of association between all parts of the cortex.

We say of the hens, that instinct taught them the life-saving attitude. Instinct is as good a name as any for the congenital development of certain tracks of communication, between motor and sensory cerebral centres.

The young violinist, laboriously gets his fingers upon the proper distances, on the strings and keeps his bow going.

What is he doing? He is opening up paths of greatest ease between the cerebral centres by which he perceives the notes of the score, the sounds which he makes and the motor tracks he must use.

Now note the master of the violin: His sheep tracks have been marvellously opened up and he would spoil his music hopelessly were he to think of the position of his fingers. He has become as truly instinctive as the hens.

Instinct is related to another term—the subconscious mind.

We, like the hens, are born with subconscious minds. As far as we can judge many animals develop nothing higher than a subconscious mind.

The higher animals, including ourselves, manifest something additional, something superimposed, a conscious mind.

Now note! As soon as we use this conscious mind, with increasing ease and skill, the sub-

*Read before the Wayne County Medical Society, Dec. 3, 1917.

conscious mind, presently, takes charge of the conscious mind's labored acquisition.

Our subeconscious minds do the most perfect work of which we are capable and constitute the core of our mentality.

In the Saturday Evening Post of Oct. 20th, 1917, Mr. O'Higgins, in an excellent presentation of the subconscious mind (under the title "Our Other Self") says this:

"What science cannot yet tell is: How to use? How to control? How to take advantage of these subconscious faculties that are so powerful and important?"

Until I had the good fortune to read "Tics and Their Treatment, by Meige and Feindel" I had thrown up my hands, at the treatment of tics but these authors make clear the great and fundamental basis of all tics: *All tics are conscious acts, in their beginning* and the victim, in his efforts to conquer one tic, is liable to form others, associated tics, but always these are also conscious at first.

Now the persistence of a tic opens up a new cerebral sheep track. The conscious act becomes subconscious; like the violinist's fingering. Notice this: The violinist can make himself play badly as long as he keeps his mind upon the mechanism of playing but once let him again "forget himself" let him "play" and all his power of expression shows.

The subject of a tic can restrain his movements, for a time, by "putting his mind on it" but once he "lets go" away go the movements.

It is of no use to scold him, no use to adopt meehanical devices (as so many do). His subconseious mind uses the well worn sheep tracks. In short, we cannot cure a tic by any appeal to the conscions mind.

Nevertheless he can be eured and *that by his subconscious mind*. Within limits, we "can use, can control and can take advantage of the subconscious faculties" and that by auto suggestion.

Here are three stories:

When I was a lad, the talk about the breakfast table was about a theatre panie; folks trampled to death trying to eseape. I said "Well, if ever I'm in such a panic, I will sit still." This roused my parents, brothers and sisters to great hilarity and, being of a somewhat obstinate disposition, I heatedly insisted that that was precisely what I would do. Thereafter, for years, any

little evidence of a cocky disposition on my part brought the recurring gibe, "Oh yes, David's the boy who is going to sit still in a panic" and just as resolutely, I bucked up with "Yes, that's just what I will do."

Later, when I was a student in New York, I was in a panic: 2,000 people, an explosion! Scared? Yes; so scared that I was dazed but when I "came to" I found myself, the only one in the place, *sitting in my seat*.

My subconseious mind had been drilled, educated by the frequently and strongly determined will to sit and had *held me in my seat*.

I sent a copy of the next morning's paper to my folks and said "I sat still."

The second story is this:

A fine capable business man was brought to me, hopeless and in tears and despair, on account of a furious tic, by which he twisted his head as far around, as his neck could let him and very extreme facial distortions.

For months, he had been a practically ostracized man, never appeared in public, had eaten his meals alone in his room, business abandoned, thing going on eonstantly. I said "You can be cured but I can't cure you: You shall cure yourself. All I can do is to superintend your re-education."

I then told him my "Panic story," explained the nature of his subconscious mind and told him this:

"Every time your head twists let it twist and give up all your useless devices to prevent it twisting. It can't twist off! Let it twist, but every time *say to yourself* (which is as much as sending an order to the subconscious mind) 'I won't let myself do it.' Say it hard! Mean it! Don't worry because it still twists. You are not trying to stop today's twist. You are training your subconscious mind to take hold of you later."

Frankly, no religious exhorter ever had a harder or longer wrestle with some sinner "coming through" than I had, for some months but the man won out. Won out so completely, that, when he had recovered, his partner, who had been carrying the entire business, broke down and was off duty for five months, during which time, my patient carried on the entire business, alone and *never a tic*.

The essence of cure lies in this: The patient

must, first of all, cut out all devices to prevent the tic. Let it go. Be content to let it go for the present. Must understand the relation of his subconscious mind to his conduct and then put his best will power into constant autosuggestion. The highest function of the mind is self control! Self control is the education of the subconscious mind by the conscious will. The subconscious mind opened up certain sheep tracks when the tic habit was formed but the will can open up controlling paths to restrain the first. Repetition is the method.

One more case:

A young married woman came to me in this shape: She had a similar torticollis tic; so incessant that she could wear no hat but had a little shawl over her head. Rode on the street car and walked on the street with one hand grasping her chin and the other arm encircled her head around the shawl and, thus, forced her face to the front.

She was of a much less intellectual type than the gentleman already described, but the same

plan worked equally well. I particularly mention this case because, a few months later, her sister turned up, with precisely the same phenomenon and went through the same course.

Nothing could better show the imitative and voluntary nature of the performance.

I believe that the principle of insistent education of the subconscious mind has a range of utility far outside of these motor tics. That we are only beginning the uses of suggestion, but a conquered tic is a sort of visible demonstration of the efficacy of the principle.

The plan works. The physician's part is to strongly, steadfastly hold the patient to his job.

The plan will work with children old enough to understand. It will not work with young or old who do not regard the tic as worth the sustained effort. The boy who said, of the multiplication table, "I don't think it was worth while to go through so much to learn so little." never became a mathematician.

32 Adams Ave., W.

AMERICAN VERONAL.

In the Trading with the Enemy Act recently passed by Congress, provision was made for the licensing of American manufacturers by the Federal Trade Commission to produce articles and substances patented in this country by enemy aliens. Already a number of chemical manufacturers have taken advantage of this provision, among them The Abbott Laboratories of Chicago, which has applied for and secured a license for the manufacture of Veronal, which, however, will be known hereafter by the name Barbitol. This is the official name given it by the Federal Trade Commission, and this name must be used as the principal title by every firm manufacturing it under license from our Government.

The Abbott Laboratories have already begun the manufacture of Barbitol (formerly known as Veronal), and we understand that in short time it expects to have an abundant supply of this well known hypnotic, and that it will be made generally available through the trade. The quality of the product is guaranteed. Indeed, before a license is granted for the manufacture of any of these patented synthetics in the United States, the product must be submitted to rigid investigation at the hands of a chemist designated by the Federal Trade Commission. In this way Americans are assured of supplies of the American-made products at reasonable prices, and the manufacture of fine American chemicals is given the stimulus which it requires.

Those interested are urged to communicate with The Abbott Laboratories, Chicago.

PROPAGANDA FOR REFORM.

Salvarsan Manufacture Authorized in U. S.—The Federal Trade Commission has granted orders for licenses to three firms to manufacture and sell arsphenamine, the product heretofore known under the trade name of salvarsan, patent rights to which have been held by German subjects. Provided conditions of the license are accepted by the firms, the following will be authorized to make and sell arsphenamine: Dermatological Research Laboratories of Philadelphia; Takamine Laboratory, Inc., of New York, and Herman A. Metz Laboratory at New York. The license stipulates that the name arsphenamine be used in connection with the trade name, that the product must be submitted to the U. S. Public Health Service for examination before sale, and reserves the right to fix the price (*Jour. A.M.A.*, Dec. 8, 1917, p. 1989).

The Carrel-Dakin Wound Treatment.—From observations of the results of the treatment of wounds by the Carrel method, Wm. H. Welch is convinced that Carrel deserves credit for calling the attention of surgeons to the possibility of the sterilization of infected wounds by chemical means. The Carrel method actually accomplishes sterilization sufficiently for surgical purposes. The destruction of surface bacteria without injury to the body tissues is of primary importance (*Jour. A.M.A.*, Dec. 8, 1917, p. 1994).

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Arthur M. Hume, Chairman.....Owosso
 Guy L. KleferDetroit
 W. J. Kay.....Lapeer
 W. J. DuBois.....Grand Rapids

EDITOR

FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
 Grand Rapids, Mich.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

February

Editorials

ANNUAL MEETING

Place: Battle Creek.

Time: May 7-8-9.

Host: Calhoun County Medical Society.

Program: One of the best.

Features: No one can afford to miss them.

Attendance: The largest.

THE ABUSE OF THE INDUCTIVE METHOD OF INVESTIGATION.

A great deal of medical literature is being printed of late which the active practitioner is justified in passing up as unworthy of his attention. We do not refer to any lack of originality nor to carelessness. What we have observed to be a prevailing tendency in the leading medical journals of our country is to assume that because certain opinions are backed by an abundance of tabulated statistics or frequent references to a large bibliography they must necessarily be correct.

As an example of this laeiose acceptance of conceptions based on poorly selected data (or rather data which has not the least claim to be

considered select in any meaning of the term implying mental effort) instead of conceptions deduced by a careful consideration of the primary facts and all the relationship and significance of these facts: we have in mind an abstract that we saw not long ago on an article discussing the results of 500 tonsillectomies. In the course of this article the writer states that such and such a number showed improvement of general symptoms, another percentage had improved hearing and so on through the whole list of the benefits known to be obtained from the operation. What in the name of common sense is the use of such wearying verbiage? Does it prove anything at all except that tonsillectomy does good in some cases? Suppose 10 per cent. or 90 per cent. showed improvement in hearing, would we be any more careful or careless in deciding in what cases of impaired hearing we would do tonsillectomy and what ones we would not? Would it not have been extremely more enlightening to have investigated in just a few of these 500, in just one perhaps, why improvement did or did not occur?

This is not an isolated instance of where mechanically compiled statistics are employed to take the place of searching observation and discriminating judgment of the conditions discovered. It is a characteristically German method where time and material are cheap but imagination and ingenuity rare. None of the initiated would think of selecting a surgeon because of his mortality statistics. Like all statistics they are only half-truths.

It would not be difficult to prove that modern science owes more to the sagacious deduction of cause and effect from single experiences than it does to the careless inspection and classification of a great many experiences. The law of gravitation was discovered when Newton saw the apple fall and thought. Beaumont, in studying a single case did more to advance the knowledge of physiology than thousands of experiments with the electro-cardiogram have done. Benjamin Franklin sent up a kite and discovered the nature of lightning.

We yearn for new and better ideas but we

believe that rushing into print with meaningless case records and other data, the only merit of which is quantity, should be discouraged.

THE AMERICAN COLLEGE OF PHYSICIANS.

The American Congress on Internal Medicine was incorporated under the laws of the State of New York, February 2, 1915. The object of the congress is to promote the advancement of the science and practice of medicine, to further the study of biological medicine among its members, to elevate the standard of preliminary education of physicians and the standing of medical education, and secure enactment of just medical laws by the State and Federal Governments and of a Federal Law providing for a national medical license, to obtain the establishment of a National Board of Health, to promote friendly intercourse among physicians, to enlighten and direct public opinion in regard to the great problems of health and medicine, and to unite those working in the domain of internal medicine, to secure recognition for the term internist as the proper designation for such workers and to obtain proper scientific and material recognition of their work.

The Congress is affiliated with the American Association for the Advancement of Science.

Any qualified physician engaged in the general or special practice of internal medicine or in laboratory research pertaining to it, may be proposed for fellowship.

The American College of Physicians is part of the American Congress on Internal Medicine. Through its council, it admits to its fellowship by election, those recommended by the council of the American Congress on Internal Medicine from among its members. The membership in the college is restricted to those whose practice is generally in the field of internal medicine or especially in the recognized departments of the same.

Any fellow of the American Congress on Internal Medicine who has been in actual prac-

tice of his profession for not less than ten years shall be eligible for election to membership in the college.

Election to the College shall be made on recommendation of the Council of the Congress and concurrence therein by the Council of the College, and shall be based on the ground of special meritorious services rendered to the science and practice of medicine by the candidate for election.

Fellowship in the American College of Physicians has been safeguarded, so far as human foresight can go, and it is intended to be reserved for doctors of medicine who have achieved eminence in the field of internal medicine as practitioners and consultants, as investigators and scientists, and as authors and teachers. It is intended that fellowship in the American College of Physicians shall mean that its possessor has attained eminence in, and is an authority upon some of its recognized subdivisions. "No one has reached a position of conceded eminence in his profession unless it is made to appear that he is deeply and broadly educated, that he has made some substantial contribution to the literature of the medical profession, and that he has been entirely related to some phase of medical practice for a sufficient time to cause him to be widely recognized by intelligent members of the medical profession, as well as by a considerable number of people who have occasion to be interested in the services which that profession renders the people." The phase which concerns the college is internal medicine. "Authority in the medical profession is not acquired through a medical education that is only ordinary and a practice that is merely usual; eminence in the profession can be acquired only through the assiduous prosecution of medical practice for a considerable time, and through some special work, that has laid the profession under some obligation to the practitioner." Eminence and authority, as used in this connection, must be given a substantial and significant meaning.

Editorial Comments

If you have any war correspondence from members in active service please send it for publication because we find that many of our readers are extremely interested in every medical feature of war service. Especially do we solicit letters from members "Overseas."

We have refrained for two or three months commenting upon our advertisers or the need of our members and readers patronizing our advertisers. We dislike continually harping on the subject. Nevertheless we want to impress you once more with the necessity of patronizing the firms who are making your *Journal* possible. Please remember them at all times and buy from them every time—give them your preference.

Once more—your 1918 dues are payable now. Please pay them to your County Secretary promptly and avoid liability of being suspended.

The intimation has reached us that there is a movement afoot to abolish the State Boards of Medicine, Dentistry, Pharmacy, Barbers, etc. and combine their administrative activity under the State Board of Health. We are not informed as to who are fostering such a scheme or its political portent. We hope to learn the details and impart them to our readers.

A soldier with but one shot left in his rifle found himself between two dangers that threatened his life while he was on the outer posts. Of course he was an Irishman. In front of him was a boche and behind him a charging bull. In telling of his predicament later he stated that he used his one bullet to kill the boche for he said: "He could shoot the bull anytime." Probably if a few would annihilate

the "bull" we might be relieved of a considerable of the braggadocio that is becoming predominant in many circles and individuals.

If the Program Committee that is preparing the program for our annual meeting requests your cooperation do not hesitate or decline. We want every member to do his best to make this one of our most successful meetings in point of scientific value as well as attendance.

Yes, it was some storm, some cold and some snow. Probably you were prevented from attending the last meeting of your local Society. If so make up for it by letting nothing interfere with your next meeting and also take some part in the program.

Why wait? Better pay your 1918 dues now and prevent possibility of lapsed membership and loss of medical protection.

The fact that alcohol is no longer being produced and druggists are refraining from selling the supply they have on hand is necessitating its discontinuance in the practice of medicine and surgery. We welcome our members imparting for publication how they are adapting themselves to this conditions. What are you using for "Back Rubs," sprains, lotions and how have you supplanted it in surgery? All our readers will welcome your suggestions. "Let's have them."

Your Editor has served in office for five years on the mailing of this issue. Sixty numbers of *The Journal* have been published under our direction and in every one of those issues we have sought to cause them to contain articles of interest and instruction to every member. Likewise have we sought to impress upon every reader the value to him of active participation in Society work and to realize that his county and state society membership was and is one

of his greatest aids to professional success. We endeavored to instill in our members society loyalty and to arouse organizational enthusiasm. Personally, we have not appraised the results of such effort—we are leaving that to each member. What we want to do is to again solicit your suggestions and urge renewal of your support so that our progress may not want. This year is going to require extra effort on the part of everyone. May we not be found wanting.

THE WAR'S RECOMPENSE.

Ye that have faith to look with fearless eyes
Beyond the tragedy of a world at strife,
And know that out of death and night shall rise
The dawn of ampler life;
Rejoice, whatever anguish rend the heart,
That God has given you a priceless dower,
To live in these great times and have your part
In Freedom's crowning hour.
That ye may tell your sons who see the light
High in the Heavens—their heritage to take—
“I saw the Powers of Darkness put to flight,
I saw the Morning Break.”

—Red Cross Magazine.

President Biddle has appointed the following members to fill the vacancies in Section Officers occasioned by incumbents having departed for active service:

Medicine—W. J. Wilson, Detroit, Secretary.

Ophthalmology-Oto-Laryngology—Ferris N. Smith, Secretary.

There is no question but what the program will be of exceptional interest and value. The Scientific Committee met in Detroit on January 23, and having outlined a program they are now actively at work seeking to perfect it in every detail.

Camp Custer, being located at our place of meeting, arrangements are under way to make a visit and inspection of the cantonment, one of the features of the meeting.

There is no question in our minds but what we will have a most successful annual session. Put down the dates, May 7, 8 and 9th, and plan

now to attend. Make your hotel reservations early. More details will be imparted in our next issue.

We, as professional men, may say that our object is to serve humanity. Nevertheless every service involving the payment of money is a business transaction, at least is so considered by our patients, and unless we apply ourselves more to the business side of this transaction and forget the illusion that it is unprofessional to consider proper remuneration for our service, our combat with the increased high cost of living in the future may end in a business failure.—Dr. E. A. Schmuck.

If you are alive, it's news; tell us about it. If you are dead, it's news; tell us about it. But if you are just standing still and letting time and tide pass by, without making an effort to grasp, hold and improve a precious moment or a golden opportunity, it's not news, you are just one of that vast majority of whom one never hears.

How would it be to get out of the rut?

The severe storm and railroad blockade necessitated postponement of the Council meeting on January 16th. The meeting was held January 23d. A full report will be published in our next issue.

No doubt you may have seen the several notices, under “General News” in the *Journal A.M.A.* in several recent issues, entitled “Once more a warning.” These refer to swindlers operating in different sections of the country, various letters having been received from victims in Ohio, Colorado and other widely separated states. Now comes a letter from the well-known publishing house of W. B. Saunders Co. of Philadelphia, saying a man under the name of E. T. Rogers, claiming to represent the University Progressive Club of Cincinnati, for medical and other journals, has been victimizing physicians in Illinois; and the same subscription swindlers, or another under

the name of Robert Wayne, has been relieving physicians of their well earned cash in the region of Gary, Ind. It is believed there is concerted action, perhaps by an organized band, being taken at this time of the year, to victimize physicians on so-called "subscription" schemes. Every physician should decline to pay any money by check, or otherwise, to subscription agents not personally known to him, or for whom other physicians can not vouch. Many of these so-called agents operate under the guise of students "working their way through college."

There are being conducted by the Red Cross Chapters classes in Home Nursing, Dietetics and First Aid. Enrollment in these classes consist of good-hearted, earnest lay women who are preparing themselves to be of at least some aid should the emergency arise. Recently we went over some of the examination papers and have selected the following answers as imparting a light upon how the subject has been grasped:

Q. Describe the spine?

A. The spine is a long bone running the entire length of the body and is very dangerous.

Q. Describe how you would prepare a Sitz-bath?

A. Fill the bath tub half full of water and put in as much "Sitz" as the doctor orders.

Another gave the answer:

A. A Sitz-bath is taken in a cup of water and is used to relieve congestion.

Q. What is hypodermoclysis?

A. It's a chest enema.

Q. What is vermin?

A. An insect usually formed on a cat and is very dangerous to have around the house.

("Tonics and Sedatives" A.M.A. please copy).

If this war does nothing more than to arouse the public to the danger as well as economic loss of venereal infection it will have been a valuable war and a cheap war at any price. Thus did one authority express himself upon the subject. A recent work for lay people, "The Third Black Plague" by a member of the Mayo staff, imparts that syphilis is present in one out of every ten men. That there are in the neighborhood of 4,000,000 syphilitics in the United States.

The profession has long known the extent

and ravages of syphilis. On the whole the profession does not require much enlightenment on the subject. The great need is the acquainting the public with facts regarding venereal disease in order that they may fully realize its dangers and their co-operation be thus secured. Then and only then may we expect progress in limiting its spread and its eradication in future generations.

Our State Board of Health is doing splendid pioneer work in this line and its efforts merit naught but heartiest co-operation. True, they are following a hither untrod path and maybe we do not all understand their methods, they may make errors, they may seem to impose on personal rights but let us forget that in view of the ends sought and subscribe our heartiest co-operation.

Major W. T. Dodge, Medical Officers Reserve Corp—thus reads the commission received by the doctor the first of the year. A few years over the age limit but possessed of experience in army methods by reason of his years of service with our state troops, the department has secured a valuable, efficient officer.

Correspondence

REPORTING OF ACCIDENTS FROM LOCAL ANESTHETICS.

To the Editor:

The Committee on Therapeutic Research of the Council on Pharmacy and Chemistry of the American Medical Association has undertaken a study of the accidents following the clinical use of local anesthetics, especially those following ordinary therapeutic doses. It is hoped that this study may lead to a better understanding of the cause of such accidents, and consequently to methods of avoiding them, or, at least, of treating them successfully when they occur.

It is becoming apparent that several of the local anesthetics, if not all of those in general use, are prone to cause death or symptoms of severe poisoning in a small percentage of those cases in which the dose used has been hitherto considered quite safe.

The infrequent occurrence of these accidents and their production by relatively small doses point to

a peculiar hypersensitiveness on the part of those in whom the accidents occur. The data necessary for a study of these accidents are at present wholly insufficient, especially since the symptoms described in most of the cases are quite different from those commonly observed in animals even after the administration of toxic, but not fatal, doses.

Such accidents are seldom reported in detail in the medical literature, partly because physicians and dentists fear that they may be held to blame should they report them, partly, perhaps, because they have failed to appreciate the importance of the matter from the standpoint of the protection of the public.

It is evident that a broader view should prevail, and that physicians should be informed regarding the conditions under which such accidents occur in order that they may be avoided. It is also evident that the best protection against such unjust accusations, and the best means of preventing such accidents consist in the publication of careful detailed records when they have occurred, with the attending circumstances. These should be reported in the medical or dental journals when possible; but when, for any reason, this seems undesirable, a confidential report may be filed with Dr. R. A. Hatcher, 414 East Twenty-Sixth Street, New York City, who has been appointed by the Committee to collect this information.

If desired, such reports will be considered strictly confidential so far as the name of the patient and that of the medical attendant are concerned and such information will be used solely as a means of studying the problem of toxicity of this class of agents, unless permission is given to use the name.

All available facts, both public and private, should be included in these reports, but the following data are especially to be desired in those cases in which more detailed reports cannot be made:

The age, sex, and general history of the patient should be given in as great detail as possible. The state of the nervous system appears to be of especial importance. The dosage employed should be stated as accurately as possible; also the concentration of the solution employed, the site of the injection (whether intramuscular, perineural or strictly subcutaneous), and whether applied to the mouth, nose, or other part of the body. The possibility of an injection having been made into a small vein during intramuscular injection or into the gums should be considered. In such cases the action begins almost at once, that is, within a few seconds.

The previous condition of the heart and respiration should be reported if possible; and, of course, the effects of the drug on the heart and respiration, as well as the duration of the symptoms, should be

recorded. If antidotes are employed, their nature and dosage should be stated, together with the character and time of appearance of the effects induced by the antidotes. It is important to state whether antidotes were administered orally, or by subcutaneous, intramuscular or intravenous injection, and the concentration in which such antidotes were used.

While such detailed information, together with any other available data, are desirable, it is not to be understood that the inability to supply such details should prevent the publication of reports of poisoning, however meager the data, so long as accuracy is observed.

The committee urges on all anesthetists, surgeons, physicians and dentists the making of such reports as a public duty; it asks that they read this appeal with especial attention of the character of observations desired.

TORALD SOLLMANN, Chairman,

R. A. HATCHER, Special Referee,

Therapeutic Research Committee of the Council on Pharmacy and Chemistry of the American Medical Association.

Denver, Colo., December 18, 1917.

Dr. F. C. Warnshuis, Grand Rapids, Mich.

Dear Dr. Warnshuis:

Beginning with January, 1918, there will be published a new monthly ophthalmic journal, the *American Journal of Ophthalmology*, merging:

The American Journal of Ophthalmology.

The Annals of Ophthalmology.

The Ophthalmic Record.

Ophthalmology.

The Ophthalmic Year Book.

Ophthalmic Literature.

The Anales de Oftalmologia.

The new journal will have a broad basis of Editorial support, a large number of writers of original papers, and trained workers for the review department. The yearly subscription price will be ten dollars.

We would be glad to exchange with the *Journal of the Michigan State Medical Society*.

If you desire such an exchange, beginning with the first number, please inform me at as early a date as possible.

Cordially yours,

EDWARD JACKSON.

LETTERS FROM OUR BOYS.

December 4, 1917.

Editor War Bulletin:

My Dear Doctor:

Your request made long since for details of med-

ical work at the front has not been forgotten. Time and opportunity have thus far not permitted. I can only speak of my own work, and some interesting details will have to be omitted on account of censorship regulations.

We are located in a large French heavy artillery camp which was projected before the war and has since been hurriedly constructed to a capacity of about twenty-four thousand. The buildings constructed before the war are permanent and those constructed since, temporary. We are located not many miles from the front on ground that was fought over during the Battle of the Marne, and since, and my quarters at present are in a large concrete building that still shows shell holes in its north end. The farming country north and east of our headquarters is dotted with blue, white and black crosses, erected over graves of the invaders and the French heroes of the Marne.

The period of the war for the French has been sufficiently long to enable them to become well organized. I have had abundant opportunities to observe artillery, gas and air work of the French, and find myself wondering at the completeness of their organization and attention to details. The completeness of their camouflage for everything conceivable in the war zone is to be noted.

My work is of much interest. Our battalions or artillery groups are widely separated, and my visits thereto take me to many interesting sections of France. En route to battalions I have had opportunity to visit villages and cities that have become historic in this war, such as Meaux, Beavais, Senlis, Rheims, Mailly, Paris, and many others. These visits of inspection are made in motor cars, singly and in train, with either motors or ambulances, and may be during day or night, frequently the latter. Traveling in a line with a string of motor cars or ambulances at night is highly interesting. The French villages are often only separated from three to four kilometers, and are forbidden to have lights at night, and the houses have the shutters closed. The streets in these villages are like Chinese puzzles, and if you can roll out at the right side of the village you are lucky. Pocket flashlights are our sole dependence in getting about, as they enable us to read our maps and the road signs. I have covered several thousand miles in these trips, and you can imagine that I have stored away some interesting stories. Much of this country visited is beautiful, some of it, particularly Senlis and Rheims, has been so ruined by the invaders that the outline is melancholy beyond expression. Paris is still the capital of the world, and most of France is still the sunny France of old.

The recuperative power of the French in all lines is amazing, and we must take off our hats to them

in this fight for democracy. Their efficiency in air work and gas work is little known in the States. The latter especially being wonderfully developed.

I am daily busy at our headquarters with inspections, sick calls and preparation for still greater activity, which necessarily goes with an artillery formation of this character.

I trust that you are well and that you will have the kindness to remember me to our many dear friends.

Sincerely yours,

W. L. BABCOCK,

Major, M. R. C.

6th Regiment, Coast Artillery Corps,
American Expeditionary Force, France.

(We owe the following highly interesting letter from Capt. W. W. Manton, to the thoughtful courtesy of Dr. W. P. Manton.)

Excerpts from a letter:

November 16, 1917.

It is disgusting to hear in a letter dated the middle of September, that not one of my letters have arrived. I've written a dozen or more and received just a half dozen since I've been here. In this great town, without a car, busy as I am on Government work, getting to other things is very slow. I got orders about seven weeks ago to leave my station at ———, and join an expedition at the front more or less already established in an old chateau near ———. We found the situation delightful at the chateau, for everything but military surgery. In that line there was no action. The advance had been so great during the past year that the place was too far back. However, we had to stay there for a couple of weeks in the kind interest of our patron, a wealthy American woman. The place was near a French training camp, and it was here that I took the pictures of the embryo soldiers in the trench, throwing the hand grenade, and also the picture of the grenade explosion. I was billeted in the town with a poor little old woman, who served me bread and butter and coffee in the morning for breakfast, in addition. The rest of time we ate dirty food in a dirty tavern at four francs a throw. At night we drank cheap wine to keep warm. Meantime the commander of the expedition, taking matters in his own hands, arranged with the French General of the ——— Army Medcal Corps to take us in during a drive. We went, nurses and all. And throughout the entire program the nurses behaved beautifully. The French surgeons were short handed and we were heartily welcomed. The first ambulance (hospital) was a wonder. Built of canvas, it depended entirely for its electrical supply for X-ray and light upon truck generators, backed up to the central tents. The tents were constructed in two layers, which facilitated ventilation, and were kept dry and warm

with small coal stoves. Unquestionably the most comfortable quarters I've struck in France, excepting only the University Club, and my present quarters. Each surgical team messed with its alternates in the same operating room, and our relations with the French complement immediately became close and interesting. The food was delicious, even though prepared in an old shell-riddled barn upon an improvised brick stove. Even the angleworms in our salad and the flies in our wine—or rather, red ink—didn't bother us much after we'd learned how to avoid eating them. It is surprising how well we were soon able to understand the French and they us. When we couldn't get along any other way we spoke German. Every night there were songs and clogs and hilarities of all sorts. A jolly bunch of fellows, those Frenchmen. One was the health officer of ———, another a prominent gynecologist of Paris. We have dined with him in Paris since. His wife is very nice. Over our heads during the day, there is generally a flock of observation balloons—captive sausages. We noticed that every day or two the Boche aviators would come over and poke a hole in one exactly at noon. This rather peeved Walter Vaughan and me. It necessitated the poor devils in the basket dropping down in a parachute at a considerable risk. Also exposed them to the machine gun in the Boche plane. We asked the doctors why the French aviators, of which there were at other times a dozen about, didn't protect their sausages. And the doctors replied, whimsically, "Oh, how can they, the aviators are having their lunch." This is really true. Can you beat it?

The Boche always shelled ———, which is behind us, night and morning, and also a wagon-supply road and railroad intersection, which was about 300 yards away, between us and their lines. In other words, they were shooting over us, and just ahead of us. Hence we all thanked the Lord that the Germans maintained their customary precision in loading their shells, for an ounce less or an ounce more of powder in any one shell would have turned our ambulance into an awful nasty mess. As it was, it was less dangerous than crossing Woodward Avenue, Detroit, Michigan, U. S. A.

Well, we stuck around this place for a couple of weeks, watching the French pile up munitions for a drive. Every hour overhead there were air flights, and the anti-aircraft guns, which never hit anything, kept pretty busy, too. They are more dangerous than the enemy's planes, because the shrapnel, and especially the heavy shrapnel containers, come down with that old-fashioned dull and sickening thud, and bury themselves three feet in the ground.

Twice a week we'd go to ——— to get a hot bath and some ham and eggs. And each time we visited

the bath house we'd find the place would have one more room knocked off. At last we were bathing two in a room. That poor room was surely over-worked, and a bath in the same tub after a poilu just out of the trenches was a poor apology. Other days we'd visit trenches just evacuated by the Germans. Apparently the enemy were good sports, for the entrance to most of their underground quarters were cleverly hidden under empty champagne bottles. Apparently they were religious, too, for I succeeded in retrieving a chromo of Jesus Christ from one of the walls. They had laid out beautiful drainage systems through the hills, and had constructed splendid shower-bath platforms from tiles swiped from this and that demolished chateau. One entered some of the dug-outs (abri) by means of marble steps—also purloined.

The drive, when it came, lasted about three days. During that time we worked about twenty hours out of twenty-four, spending the rest of the time eating. For the meals were always regular, complete, and enjoyable throughout it all. Such is the French system. Only five miles from the battlefield, we were able to operate on our men within five or six hours after they were wounded. Hence the results in general were excellent. In short, we had practically no sepsis, because we got the men promptly after their first aid dressing—put on usually by a comrade in the trench. The men came in in ambulances, were bathed, the missile was located by the X-ray and we removed it.

The day after the territory was won we took a trip over the ground. The French fire had been frightful. They sent over 460,000 rounds to the enemy's 90,000. This was prettily demonstrated because, on the territory where the German fire fell there were rare grass plots between the shell holes, while on the areas which the French were shelling, there was nothing but the holes in clay with the rims between—no green in evidence. Trenches obliterated, everything buried except in rare spots where the snout of an abandoned tank lifted itself into the cold, gray air, or a dead man lay curled up over his less than six feet of earth. Two of us stumbled onto the town of ———, of which not one stone was left upon another. The town just clean flat with the ground. The enemy was shelling this territory ferociously, because the French were bringing up their artillery over the remains of two roads. We had on our steel caps, which protected our heads from small shell fragments. Also we soon learned when a shell was coming towards us, in which case we dropped to the ground to avoid kick-ups from the near explosions. There was no chance of being hit, for a direct hit is the rarest thing in the world.

I got a number of empty brass shells and a couple of Boche helmets, some of which junk I'll try and send home. When we got back to the Ford Ambulance—here I take off my hat to that great little machine—we found that that portion of the road was being shelled and that our friends were taking refuge in a trench. So we got out as quickly as we could.

A few days later we left for Paris. I hated the idea of returning to my station in ———. 'Twas cold and damp there, and there was nothing to do. So I stepped into headquarters on the way down to see if I couldn't be sent up with the British or down with the Italians. The minute I entered Colonel Ireland's office, he jumped up and said, "Why, we've just been talking about you." And I said to myself, "What the deuce is up—have I committed some crime or broken some military rule?" But the colonel promptly bounced me in before General Bradley, who immediately told me that I was to be the goat on a job. It seems that Mrs. Whitelaw Reid is fitting out a small hospital for American officers, and turning it over to the Government. It is situated in the Latin Quarter in Paris, and her right-hand lady, with power of attorney, is getting the place ready, and getting it ready right. The best operating outfit, the best X-ray machine, the best rooms, the best quarters, plenty of heat and hot water, the best food are being accumulated for this enterprise of sixty beds.

The General thereupon gave me a lecture on tact and on patience, and the Colonel looked me over from head to foot and complimented me on my clothes and boots. Fortunately, the boots were high and English, and had been assiduously polished before appearing at headquarters. In short, they told me that I was the commanding officer of the hospital, and to go ahead and do what I could with it. So here I am in Paris, with two or three lieutenant assistants, a flock of nurses, a corps of enlisted men, with a real institution on my hands, at the tender mercies of an illustrious patron, and the Government, situated in the midst of the great French Hospital, Educational, Art, Science and Letters district—for the winter. I'd like it if I didn't feel more like going to the front. I'm ashamed to admit that I'm one of those fools (or liars) who actually likes the boom—s—s—ra—s BOOM. The start of the dammed thing, the sharp clatter over its fifteen-mile trip through the air like an express train, violent and invisible, and its tremendous wreck at the finish is fascinating.

However, I shall remain in Paris, attend the clinics, study French, and do some work—if we get any patients.

"Orders is orders," and perhaps I'm more useful

here than anywhere else—or useless. That's for them to find out.

Meantime, I'm working hard to get the hospital into shape.

W. W. MANTON, Captain, M. R. C.

(Dr. Wesley Taylor has been kind enough to give us this letter, which we know will interest everyone, from Major "Bill.")

November 2, 1917.

Dear Wesley:

I am enclosing my check for \$5.00 toward the assessment of the Patriotic Fund of the Society. I am also enclosing two little relics, which I thought might interest you—one a piece of the Zeppelin L-49, which was brought down near here last week, the other is a piece of music I found in a ruined house in Peronne. They don't amount to anything but I thought you might be interested.

I have had some most interesting trips since I've been in France. I have seen some of the British front—have been over the Somme battlefield and the country devastated by the Boche in his retreat. You cannot imagine the desolation—nothing remains—no trees, no houses—simply ruins. In two days' travel by automobile I did not see a house in hundreds of towns and villages where one could get any shelter. Even the cellars were blown up. Many villages have completely disappeared—not even a brick remains. The ground itself is torn to pieces—nothing but trenches, shell holes and mine craters. It makes you sick at heart to see it all and to imagine that the same might happen to America. Besides this I've seen active operations. We were several weeks within two miles of the front and under intermittent shell fire. Two days of this time we were at the front and received some hot straffing from the Boche. One night I saw a raid—the barrage, the many lights, the noise and all, made it a spectacle which I'll never forget. We were up nearly all night at the advanced dressing station, seeing the wounded come in.

I've also been along the French line and have seen some of their front.

The best trip of all and the most exciting was one from which we have just returned. We spent two weeks on the Italian front, on a mission, and were royally entertained by the Italian Government. We were furnished with two military automobiles, and with an Italian major as guide, we saw all three fronts under ideal conditions. Never will I forget it. Alpine scenery and war make a stupendous spectacle.

I was much surprised to see to what perfection the Italians have their medical and surgical service. Their hospitals were the best I've seen. I say "were," as within two days after we left, the Boche

had them all. Through great luck we were on the Isonzo front when the present great offensive began. We were also in great danger, though we didn't realize it at that time. Since returning I read that several of the places where we were on Oct. 24, were in the hands of the enemy that same evening. We are just commencing to get scared now and seeing how lucky we were. Words cannot describe the sight that we saw from a nearby peak—of Goritza bombarded—of a fierce battle on Mt. Gabriele. Thanks to our good fast Italian automobiles we got out safely. We also got out of Italy by the last train, catching it at Venice after a long automobile ride. The sight of all the refugees, especially women with children, was enough to make your heart sick. I have seen war in many places and assure you it is worse than you can possibly imagine.

All is well with Base Hospital No. 17. We are hard at work increasing our capacity. There is nothing much doing professionally to date. With best regards,

H. N. TORREY, Major.

November 14th, 1917.

Headquarters Ambulance Co. No. 168, 117th Sanitary Train, 42nd Division.

The only Michigan National Guard Unit in Foreign Service.

Dr. George Parlmerlee, 410 Washington Arcade,
Detroit, Mich.

My Dear George:

Sorry I cannot tell you just where we are located and describe to you our picturesque and historical surroundings, but our strict censorship will not permit me to do so and, as I am my own censor, I must be doubly vigilant and not sign my name to a censored letter, which has the faintest sign of a "leak" in it, so you see one must be extremely secretive and always on his guard.

However, I can state that we are in a most picturesque and wonderful part of the continent, where centuries of history have left interesting traces on all sides. Art and sculpture, even in decay, mark almost every turn in the roads of the country and, even these very roadways show signs of the early Roman times, when Julius Caesar built his highways and led his cohorts through this same country.

It surely is inspiring to feel your feet gripping the same soil those early heroes trod and to know that the United States is given an opportunity to make new history, to fight and conquer where those valiant soldiers bled, and may leave behind her landmarks of civilization, which future generations will point to with the feeling of awe and pride we possess in viewing the relics now here.

It is also extremely inspiring, but in a very dif-

ferent way, to listen to the booming of the big guns at the front and the staccato of the deadly machine gun and the feeling is entirely different, George, from hearing them in practice at one of our summer training camps, for one cannot but know a far different thrill when he must realize that that rattle and dull thud carry death in their wake.

We passed the Harper Boys on our way in here and although they are not to be our Base, they will not be very far from us and it is a comforting feeling to know where any, of ones friends are, in this game, even though they may be fifty miles away. We had an hour's visit and a cup of refreshing coffee with them and, believe me, it was some treat to meet one's home town pals, as we met them, thousands of miles from that old home town. They are all in good health and the best of spirits and gave us loads of news from old Detroit, which was a treat to us, since we had had none for weeks.

We draw our Ford Ambulances tomorrow, so it will seem like old times to be back again on the seat of the familiar old "flivver" and all of my men are on the alert for the draw.

The men of my command are all in good form for any duty which may be assigned to them and their health is excellent, barring an occasional cold or lameness from the effects of the hard work they are doing. Every one is "rassling" with French, as there are but six natives in this entire city who speak our language and one must use theirs or go without what you want, for it is a characteristic of the native, here, to get everything but French so mixed up that you would not recognize your own photograph, after he had turned it around a couple of times.

These people wear a wooden sort of overshoe, odd clothes, have odd customs, such as walkin in the streets instead of on the narrow sidewalks, are easily excited over trifles, gesticulate very liberally with their hands, seem to delight in misunderstanding you and insist on talking French, even though they may know the one English word which would fit the situation and clear up the whole difficulty.

The French officers, who are about the city, on a short leave from the firing lines, dress in such a variety of costume that one could hardly use the term uniform at all and an interesting sight to see is one of the Poilus, who, from his habit of wearing a beard, is dubbed "the hairy one" or "Poilu"—short of stature, grim visaged but resolute, with his long gun and ever fixed bayonet, guarding a half dozen big, husky, young German prisoners who seem to need no further persuasion than an occasional glance from the "garde" to stimulate them to untiring endeavor.

All of the local work is done by these prisoners and, while I used to think what a tremendous ex-

pense a country was put to to take care of her prisoners, I now wonder how she could get along without them.

No danger of them escaping. Where could they escape to? No danger of them objecting to their treatment for it is better than they have been accustomed to at the front and "objections are overruled" any way. And so the game goes on. They do the manual labor, plow and till the country, unguarded, work at all sorts of things, even building our barracks for us, and seem quite surprised that Americans are with the French so quickly. They even accused us of being English dressed up to deceive the German and people in general.

This is a very quaint city and as it is to be our Divisional Headquarters naturally we are more interested in it than in any other part of the map. It is old, built of solid stone, has stone roads and streets. These are narrow and built up to the sidewalk but were built for the ages, one barn in which I have thirty men quartered was built in 1774 and is in perfect repair today. Many rare and costly pieces of statuary, monuments, chateau and churches, dating back to feudal days are to be found here and the customs of the people are all of about the same period.

We are billeted, which is a custom of an early period and consists in sending a squad of twenty men here and ten or fifteen there. These men sleep in lofts, barns and garrets. They are warm and dry and roomy enough to be comfortable so we have no cause for complaint at all and as the men live on U. S. supplies and rations, even to American white bread, a thing unknown to this country since the war chased it out, fresh beef and so forth, you see war is not so bad, after all that Sherman said it was.

Personally I am situated better and more comfortably than ever before on any military tour I have made. Am billeted in a big front room on a second story stone house on the main street, a regular jaw twister (No. 20 rue de Domremy) and my room has the most elaborate furniture you ever saw, even to a big, old fashioned, four combination, iron safe, two rare marble clocks, with rare chimes, a big, soft bed so high I have to take a run and jump to get into and the usual soft, downy thick covering, to keep one's feet warm and all the accompanying things which go with affluence.

Of course we do not know what hour a big "Zepp" will come along and spoil it all but in the meantime we're enjoying it.

Yours in the harness,

ROBERT J. BASKERVILLE,

Capt. M. C. N. G. U. S.

Commanding.

Our Motto
SERVICE VOLONTAIRE
et
EFFICACE

P. S.—Buck, Mc, Leckslider and Hanna send remembrances. B

Base Hospital No. 36,
American Expeditionary Forces,
December 16th, 1917.

My Dear Walter:

We are well settled in our permanent home and are delighted with our Station. Majors Shurly and Walker have just returned from a motor trip and assure us that we have the very best of all the Base Hospital locations. We will have five buildings built for summer hotels, each one of which will accommodate more patients than St. Mary's. We already have nearly five hundred cases, all medical, and in a few days will be ready for 1,500 of the 2,000 we are equipped for. This is quite a record and in contrast to some other units, which still have only between one and two hundred patients. The reason is I think that our location is right in the midst of things—we can hear the guns! A couple of days ago I motored to a city within ten miles of the front line. Their place had been shelled and we saw some ruined buildings. There was the wreck of a German plane in the Central Square, and also a bomb shelter for people to descend into as protection against hostile planes. But otherwise it is quite normal. All the stores were open and well stocked. I did some shopping and had a good inexpensive lunch at the hotel.

Preston Hickey is visiting us today, inspecting our X-ray plant. He has been detached from Harper and is in the Chief Surgeon's office in charge of all X-ray work, taking Case's place who has gone back home. Both the Vaughan boys are not far away, attached to the Roosevelt Unit, but I have not seen them yet. Walter Manton is in charge of a small hospital for officers in Paris, and Henry Carstens is going to help him.

Everyone is working top speed but it is most interesting and very profitable. I mean in the sense that you are doing something for the soldiers. The poor fellows are tremendously grateful—quite a contrast from some civilian patients, and there is where the profit is.

The Red Cross and the Y. M. C. A. are doing noble work here, the Red Cross fits all kinds of recreation Stations and the Y. M. C. A. runs them. Our enlisted men and convalescent patients profit greatly—morally frequently. Personally I am very well.

Very sincerely,
THEODORE A. MCGRAW, JR.

Capt. M. O. R. C., Adjutant.

Letter to Walter J. Wilson, Jr.

Dr. Andrew P. Biddle,
Detroit, Mich.

My Dear Andrew:

Enclosed find copy of letter from Chief Surgeon American Expeditionary, France, thanking Committee for its report.

The report covered—the foundation of Station hospitals, station ambulance service and transportation by teleferics (wire), we describe the special hospitals—for special lines of work—their preventive medicine by giving sera, prison camps, diet, infections and method of preparing food. We also described their method of treating infections, trench feet and cholera. I thought this would do for the *State Medical Journal*. I will send copy of report later.

Yours truly,

ANGUS McLEAN.

From Chief Surgeon, A. E. F.

To Major Angus McLean, M. R. C. Base Hospital
No. 17.

Subject—Report of Committee on observations while
with the Italian Army.

1. The Chief Surgeon instructs me to acknowledge the receipt with thanks, of the excellent report rendered by your committee on observation while with the Italian Army.

2. In a visit to this office to-day, Lieut. B. H. Larsson, Secretary, asked if there was any objection to sending a copy of this report to certain Italian authorities. The Chief Surgeon has no objections. Will you please notify Lieut. Larsson?

M. W. IRELAND,

Colonel, Medical Corps.

Committee.

Major Angus McLean.

Major Geo. E. McKean.

Major H. N. Torrey.

Capt James W. Inches.

Lieut. B. H. Larsson.

Washington, January 17, 1918.

Navy's call for binoculars, spyglasses and telescopes:
"The Eyes of the Navy."

Dear Sir:

The Navy is still in urgent need of binoculars, spy-glasses and telescopes. The use of the submarine has so changed naval warfare that more "eyes" are needed on every ship, in order that a constant and efficient lookout may be maintained. Sextants and chronometers are also urgently required.

Heretofore, the United States has been obliged to rely almost entirely upon foreign countries for its supply of such articles. These channels of supply are now closed, and as no stock is on hand in this country to meet the present emergency, it has

become necessary to appeal to the patriotism of private owners, to furnish "eyes for the Navy."

Several weeks ago, an appeal was made through the daily press, resulting in the receipt of over 3,000 glasses of various kinds, the great majority of which has proven satisfactory for naval use. *This number, however, is wholly insufficient, and the Navy needs many thousands more.*

May I, therefore, ask your co-operation with the Navy, to impress upon your subscribers, either editorially, pictorially or in display, by announcing, in addition to the above general statement, the following salient features in connection with the Navy's call:

All articles should be securely tagged giving the name and address of the donor, and forwarded by mail or express to the Honorable Franklin D. Roosevelt, Assistant Secretary of the Navy, care of Naval Observatory, Washington, D. C., so that they may be acknowledged by him.

Articles not suitable for naval use will be returned to the sender. Those accepted will be keyed, so that the name and address of the donor, will be permanently recorded at the Navy Department, and every effort will be made to return them, with added historic interest, at the termination of the war. It is, of course, impossible to guarantee them against damage or loss.

As the Government cannot, under the law, accept services or material without making some payment therefor, one dollar will be paid for each article accepted, which sum will constitute the rental price, or, in the event of loss, the purchase price, of such article.

Toward the end of January, it is proposed to distribute throughout the country, posters making an appeal to fill this want of the Navy.

As this is a matter which depends entirely for its success upon publicity, I very much hope that you will feel inclined to help the Navy at this time by assisting in any way that lies within your power.

Very sincerely yours,

FRANKLIN D. ROOSEVELT,

Assistant Secretary of the Navy.

The Editor,

Journal of the Michigan State Medical Society,
Grand Rapids, Mich.

Somewhere in France, Dec. 13, 1917.

Editor:

Many thanks for your good newsy letter which has just been received. I am glad to hear that things are going so well with you and that some of the men back home are getting interested. They sure

will have to, as our portion of this job is bound to be a big, long and difficult one.

I will be glad to ask the boys to write something for the journal but I fear that a real article of any sort will not be possible. You know that such an article should contain new stuff and you can easily see that such information—no matter how simple it may appear to be—cannot very well be printed broadcast at present. I have been with both the French and British during times of activity and sure have learned much from the experience, but I would commit a grave error to allow any of the new stuff to escape at the present time. You can readily see that if we allowed our methods of taking precautions against certain forms of attack, to leak, such precautions would be in vain, as the methods would easily be overcome. This applies forcibly to medical work also.

I am glad to hear that you are going to stay "on the job" with the *Journal*. You have made it a good one. Keep it up. Also always keep it representative of the State Society.

Sincerely,

J. WALTER VAUGHAN.

Deaths

The death of the following doctors not members of the State Society has been reported:

Dr. James W. Beck, Sturgis; Dr. Wm. D. Whitten, San Diego, Cal., formerly of Michigan.

State News Notes

FOR SALE—McCaskey cabinet in good condition. Owner in service and office must be vacated. Address Cabinet care *Journal*.

Please, Doctor, let us have the news items from your vicinity. Won't you report the "doings" in your vicinity once a month?

Mr. Marcus Freud of Detroit has presented to Base Hospital 17, two touring cars, one for the officers and one for the men (both, however, for the use of the nurses). We understand that this splendid gift has already arrived..... (you know).

Miss Unity F. Wilson, daughter of Dr. and Mrs. Harold Wilson, has been appointed by Dr. Alexander Lambert, Chief Surgeon of the American Red Cross in France, to do laboratory work for the Red

Cross in France, and is now in service over-seas. Miss Wilson was late assistant of Prof. Warthin in the Pathological Department of the University of Michigan, and to Dr. Simon Flexner of the Rockefeller Institute.

It is reported that seven more medical men, fifty more enlisted men and thirty-five more nurses are required for Base Hospital 17, and that a certain High Personage is coming back to Detroit to recruit this addition to the unit in person. Not long ago the major, on behalf of his compatriots, presented a portrait of President Wilson to the local municipality, with so excellent a speech that the mayor was "*vivement emu par cette demarche*." We are preparing an address of welcome in our best French to use on the occasion of his return.

Largely through the efforts of Dr. C. E. Simpson, Acting President, assisted by the local organization of physicians, many small gifts were sent to all members of the Wayne County Medical Society as a Christmas remembrance, gifts to members overseas having been sent a month or more ago. That the remembrance was appreciated by the "boys," numerous acknowledgement like the following have already been received:

"Received cigars from the Wayne County Medical Society for Christmas. Surely appreciated them. I felt quite proud of our society as none of the other 25 or 30 doctors here were remembered by their various societies."

W. F. S., Mineola.

Our good friend, Capt. Roland Parmeter (who, by the way, is no longer "Geheimrath," for he says that the only good Geheimrath is a dead one), says, among other things: The battle of the Aisne is now a part of history and no doubt you have read fully about it. We, our operating team, have been in Soissons all the time, about five miles back of the line of the battle. We have worked almost constantly since last Tuesday morning. We operated—all eight operating teams in the hospital—first upon the French wounded and when they were all cleaned up, we began on the Germans. Of course, there are a great many deaths and the wounds are terrible. * * * Our town has been most constantly shelled up to the beginning of the battle; since then not at all except the first night—one shell struck exactly 108 feet from the door of the house where we sleep. A wagon load of seventeen French soldiers was struck while approaching the bridge here, all being killed. Well, as I said before, it's all over now and we are most glad to get back to our base. I don't know what my next duty will be but probably a visit to the British or Italian fronts.

I'm feeling fine—the weather is beastly.

The following exhibits originality and talent of one of our county secretaries:

Owosso, Mich. Dec. 24, 1917.

My Dear Doctor:

Your check, I received it this day.

Your dues for next year you would pay:

But I'm sorry by gosh!

To tell you—no josh!

That you're one-fifty short let me say!

For the dues are four-fifty just now

So you see that is why and that's how

You are one-fifty short,

Now please do not snort,

And don't start a rough house, nor a row!

Merry Christmas,

W. E. WARD.

The following Michigan doctors received the degree of F. A. C. P. at the Pittsburgh meeting held December 27, 1917: Drs. P. M. Hickey, Guy L. Keifer, Arthur D. Holmes, David Inglis, E. W.

Haass, Andrew P. Biddle, Wm. A. Donald, B. D. Harrison, Wm. A. Evans, Guy L. Connor.

Dr. and Mrs. D. H. Long of Eaton Rapids celebrated their fiftieth wedding anniversary on December 29th. The doctor has been in practice fifty-nine years.

Dr. and Mrs. Wm. Bruinsma of Holland celebrated their twenty-fifth wedding anniversary on January 1st.

Dr. W. C. Lambert of Wyandotte has been appointed a member of the Howell State Sanitarium.

The annual Congress on Medical Education will be held in Chicago, Feb. 4 and 5, Congress Hotel.

Dr. F. M. Gowdy of St. Joseph has resumed his practice.

Dr. H. M. Dondua of Cadillac sustained a fractured wrist on Jan. 8th.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

BAY COUNTY

Dr. H. B. Morse was elected President of the Bay County Medical Society at the annual meeting held last evening at the home of Dr. W. G. Kelly, the retiring President. Other officers elected are: Vice-President, Dr. C. M. Swantek; Secretary and Treasure, Dr. Morton Gallagher; Directors, Drs. G. W. Moore, W. R. Ballard, R. W. Brown; Member of Legal Committee, Dr. John McLurg; Delegates to State Medical Society, Dr. W. G. Kelly and Dr. J. C. Grosjean.

Previous to the business meeting an elaborate banquet was served to the members by the retiring President. Before taking their seats Dr. Kelley paid a tribute to the two members of the Association who have died during the year, Dr. H. N. Bradley and Dr. F. E. Ruggless and a toast was drunk to the absent members who are in the service of their country.

Following the banquet Dr. Kelley read the President's annual address in which he dwelt upon the harmony which has prevailed among the Society members during the past few years and urged its continuance.

Two memorial tablets which recite the high stand-

ing in the profession of the two members of the Society who died during the year were shown at the meeting. Each bears the signatures of all the members of the Society. The tablets are to be presented to the families of the dead members.

Dr. F. W. Brown, who has been commissioned in the medical department of the army and who leaves today to begin active service at Fort Riley, made a short farewell talk.

The relief work which the Society is carrying on for the families of its members who enter the army service was discussed. Each member of the Society pays \$5 per month into this relief fund, which is divided among the families of those members of the Society in the service who are below the rank of captain, payments to the families being made monthly.

BAY COUNTY DOCTORS COMMISSIONED FOR U. S. ARMY

Major F. H. Randall, at Waco.

Capt. Roy C. Perkins, at Waco.

Capt. Matthew R. Slattey, at Waco.

Lieut. Frederick S. Baird, Ft. Oglethorpe, Ga.

Lieut. F. W. Brown, Ft. Riley, Kan.

Lieut. Edward Goodwin, Com. but still at home.

Lieut. Wm. Kerr, on T. B. Board at Camp Taylor.

Lieut. R. E. Stafford, with Base H. No. 36, Abroad

Officers of Bay County Medical Society for the year 1918:

President—H. B. Morse, Bay City.

Vice-President—C. M. Swantek, Bay City.

Secretary-Treasurer—Morton Gallagher, Bay City.

Member of Medico-Legal Committee—John McLurg, Bay City.

Directors—W. R. Ballard, G. W. Moore and R. W. Brown.

Delegates to State Society—W. G. Kelly and J. C. Grosjean.

Alternates to State Society—J. McLurg and C. H. Baker.

CALHOUN COUNTY

First regular meeting of the Calhoun County Medical Society for 1918, City Hall, Battle Creek, Tuesday evening, January 8, at eight o'clock.

This will be a State Board of Health meeting, and the entire program will be furnished by the members of that Board. The Secretary, Dr. Robert M. Olin, will be in charge, and will announce the program at the time of the meeting. The Board consists of the following members: Dr. A. P. Biddle, Detroit; Dr. Robert M. Olin, Lansing; Dr. V. C. Vaughan, Ann Arbor; Dr. E. T. Abrams, Dollar Bay; Dr. Guy L. Kiefer, Detroit; Mr. W. D. Farley, Battle Creek.

The program will consist of addresses by the various members relative to the workings of the Michigan State Board of Health, with special emphasis relative to venereal prophylaxis as related to Military activities. An opportunity will be given the members of our Society to discuss the addresses, and to question the Board of Health relative to the duties of the physician concerning this work.

SALUTATORY.

I wish to avail myself of this opportunity to thank the members of our Society for the honor conferred upon me in selecting me as your President for the year 1918.

I trust it will be my good fortune to be able in some measure to assist in continuing the splendid progress our Society is making.

Numerically we have made splendid progress—our membership having reached the century mark. More important, however, has been the progressive improvement in the character of the work accomplished, and continuance of which is of prime importance to us and will do much toward promoting the best interests of our Society.

The forward movement of modern medicine and its role in the advancement of our national welfare are matters of vast importance to us, and as medical men it is our patriotic duty to put forth our

very best efforts not only in curing disease but in advancing preventive medicine which has been so aptly styled "the keystone of triumphal arch of modern civilization."

Our problem as a Society is how to become more effective. How can we increase our efficiency so as to make it count for the most, for the sake of usefulness and of helpfulness to those we love and to all humanity? The answer to our problem is devotion and work—devotion to our profession and work for self-improvement. If we take a personal inventory we will find that our efficiency is in direct proportion to the amount of effort we put forth in attaining it. Consequently the deficiency of our Society may be judged by the individual efficiency of its members as applied to the promotion of its interests. Each member possesses knowledge gained by study and experience that is of value to every other member, and as the Society exists for the purpose of facilitating the exchange of knowledge for our mutual benefit in the interests of humanity, we earnestly solicit your hearty co-operation in making the Society just what you would like it to be.

Our program committee is putting forth earnest efforts to furnish us with profitable programs throughout the year, and they would greatly appreciate suggestions from members relative to the character of the programs you most desire. Your co-operation in this respect will greatly facilitate their work and be greatly appreciated by them.

Our Bulletin has been of great service to us in the announcement of the time of meetings, details of programs and news items, and more particularly in the carefully prepared abstracts of important papers which have come before the Society at the previous meeting. These abstracts are of special value in that we have an opportunity of reading them over at our leisure, thereby enabling us to fix the subject firmly in our minds, and it is also of value to those members who have been so unfortunate as not to have been able to be present at the meeting.

In conclusion I wish to extend to every member of our Society my best wishes for their health and prosperity during the year 1918, and suggest the following, which has been taken from the Bulletin of the Chamber of Commerce and modified so as to be applicable to our Society, as New Year's Resolutions:

"That I will begin the New Year with the thought that part of my time belongs to the Calhoun County Medical Society."

"That I can well afford to give back to my Society some portion of what it has given me."

"That I will co-operate with my fellow-members in every move made for our common betterment."

"That I will think only good thoughts about the Society which is good enough for me to be a member of."

"That I will talk prosperity and think prosperity about my Society and its future."

Yours fraternally,

CHAS. E. STEWART, M.D.

President.

ITEMS.

Captain Wilfrid Haughey M. R. C. is now serving somewhere in France with the Detroit College Hospital Unit. Announcement of his safe arrival was received here some weeks ago.

First Lieutenant E. M. Chauncey, M. R. C., was ordered to report at Ft. Riley, Kansas, and left for there Saturday, December 15.

First Lieutenant L. H. Tower, M. R. C., has been ordered to Washington University at St. Louis, Mo., for special instruction in Urology and Dermatology. He left for that post Tuesday, December 13.

We are informed that First Lieutenant Elijah Van Camp, M. R. C., has been advanced to Captain and lately promoted to Major and is still at Camp Sherman, Ohio. Major Van Camp is head of the Medical Department in the 329th Infantry.

REPORT OF TREASURER FOR THE YEAR ENDING DEC. 1, 1917

Balance from last report	\$132.30
Received from dues	584.00
Received from back dues	56.00
Dr. P. M. Keller postage .....	.33
1918 dues two members	12.00
Patriotic Assessment	125.00
	<u>\$909.63</u>

Disbursements

Secretary service previous to 1917	\$ 25.00
Michigan State Medical Society Dues	341.25
Michigan State Medical Society Patriotic Assessment..	110.00
Entertainment Committee	45.31
Guest's Expense	20.08
Bulletin	74.55
Printing	5.25
Postage and Messages	43.32
Flowers	16.00
Clinical Film Co.	10.00
Liberty Bond	100.00
Secretary, 1917	50.00
	<u>\$840.76</u>

Balance in Treasurers

A. F. KINGSLEY, Treasurer.

A. F. KINGSLEY, Treasurer.

BRANCH COUNTY

At the regular annual meeting of the Branch County Medical Society held on Tuesday, Jan. 15, 1917, the following officers for the ensuing year were elected, as follows:

President—Dr. F. W. Stewart.

Vice-President—Dr. Newton Baldwin.

Secretary-Treasurer—Dr. Geo. H. Moulton.

Delegate—Dr. W. H. Baldwin.

Alternate—Dr. D. H. Wood.

Medico Legal Com.—Dr. Samuel Schultz.

All residing at Coldwater.

GEO. H. MOULTON, Secretary.

CLINTON COUNTY

At the meeting of the Clinton County Medical Society on Nov. 1, 1917, the following officers were elected for the ensuing year:

President—Dr. A. O. Hart.

Secretary-Treasurer—Dr. Charles G. Foo.

This Society also voted to lay on the table the "Patriotic Fund" proposition until next meeting because there were not many members turned out at the last meeting.

CHARLES G. Foo, Secretary.

GRATIOT-ISABELLA-CLARE COUNTY

The annual meeting of our Society was held at Brainerd Hospital Alma, Dec. 20, 1917. President Gardiner called the meeting to order. Minutes of previous meeting were read and approved.

Dr. I. N. Brainerd then read a paper on Illness which was discussed by Drs. Hall, Pankhurst, Street, and others.

The annual report of the Secretary was then read and approved. The report showed we had thirty-four members for 1917. The following were duly elected as officers for 1918.

President—B. C. Hall, Pompeii.

Vice-President—J. N. Day, Alma.

Secretary—E. M. Highfield, Riverdale.

Delegate—S. E. Gardiner, Mt. Pleasant.

Alternate—C. T. Pankhurst, North Star.

By motion the Secretary was directed to remit the \$1.50 State dues out of the Society funds for any member who is absent on account of war service.

Secretary's Report.

Received from members dues	\$170.00
Remitted to State Secretary....	\$119.00
Speakers expenses	9.13
Idlehour Theater	5.00
Two invited guests to banquet..	2.00
Printing Sta., Postage and Tel.	22.87
	<u>158.00</u>

Balance

Roll of Honor.

C. B. Gardner, Alma; Jeffersonville, Ind., Depot Quarter Master Dept.

E. M. HIGHFIELD, Secretary.

HOUGHTON COUNTY

The regular meeting of the Houghton County Medical Society was held at the Scott Hotel in Hancock, Jan. 7th.

Dr. Alfred LaBine of Houghton, presented a case of Internal Hydrocephalus in an infant of nine months. The baby weighs twenty-two pounds, the head weighing fifteen pounds. The circumference of the head is sixty-five centimeters. The usual etiology of degeneracy in the parents of these cases was born out in this instance, as the father is a confirmed drunkard and mother has recently been assigned to a State institution for the insane.

Dr. D. E. Godwin of Houghton presented the eye findings in this case which were those of an optic atrophy which has probably been proceeded earlier by choked disks. The baby still has peripheral vision.

Dr. A. F. Fischer of Hancock exhibited a case of trephining instruments over one hundred years old.

The Society then proceeded to the annual election at which the following officers were elected:

President—Dr. Geo. M. Rees, Calumet.
Vice President—Dr. Simon Levin, Lake Linden.
Secretary-Treas.—Dr. D. E. Godwin, Houghton.
Censor—Dr. W. P. Scott, Houghton.
Delegate—Dr. W. H. Dodge, Hancock.
Alternate—Dr. J. E. Scallon, Hancock.

The Society then adjourned to luncheon.

D. E. GODWIN, Secretary.

MUSKEGON-OCEANA COUNTY

At the annual meeting of the Muskegon-Oceana County Medical Society the following officers were elected:

President—Dr. J. J. Hartman, Muskegon.
Vice President—Dr. R. G. Olson, Muskegon Heights.
Secretary—Dr. J. T. Cramer, Muskegon.
Treasurer—Dr. J. Oosting.
Director for One Year—Dr. Geo. Le Fevre, Muskegon.
Delegate—Dr. F. B. Marshall, Muskegon.
Alternate—Dr. J. M. J. Hotvedt, Muskegon.
Medical Legal Committee—Dr. Geo. Le Fevre, Muskegon.

Your letter to Dr. Bloom, regarding the charter to the Oceana Co. doctors and the changing of name of our Society to the Muskegon County Medical Society was read to me over the telephone. Dr. Hartman requested me to write you at once, so that this could be done at your next council meeting. We have known of this action by the Oceana men for some time have encouraged the formation of a Society of their own as it is very difficult for them

to meet with us. Regarding the change of name of our Society will say that, while no action has been taken by the Society, it no doubt is the proper thing to do and the name, Muskegon County Medical Society will be satisfactory.

J. T. CRAMER, Secretary.

SANILAC COUNTY

The seventeenth annual meeting of Sanilac County Medical Society was held in the Court House, Sandusky, on Friday, Dec. 28. at 1:30 p. m., for the purpose of electing officers for the ensuing year and other business. The following officers were elected:

President—Dr. John E. Campbell, Brown City.
Vice-President—Dr. L. E. Cockrane, Peck.
Secretary-Treasurer—Dr. J. W. Scott, Sandusky.
Member Medico-Legal Committee—Dr. D. D. McNaughton, Argyle.

Delegate to State Society—Dr. J. F. Waltz, Brown City.

Alternate—Dr. W. G. Campbell, Brown City.

J. W. SCOTT, Secretary.

Book Reviews

THE MEDICAL CLINICS OF NORTH AMERICA. Volume I Number III. (The New York Number, November, 1917). Octavo of 346 pages, 37 illustrations. Philadelphia and London: W. B. Saunders Company, Published Bi-Monthly. Price per year: Paper, \$10.00; Cloth, \$14.00.
Received.

DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS. By Norris and Landis. W. B. Saunders & Co.

This is the most exhaustive study of this subject that has been published in recent years. While written from an intensely scientific point of view and with due reference at all times to the underlying physiology and pathology of physical signs, it is nevertheless, splendidly practical. A rare merit of the book is that the most precise details are given wherever a method is described.

The book is not an encyclopediac compendium of all previously published theories and notions but is a forceful, abundantly illustrated, and clear cut presentation of the facts and principles by which one may become proficient in the diagnosis of heart and lung diseases.

WHITE & MARTIN'S GENITO-URINARY DISEASES. By Edward Martin, A.M., M.D., F.A.C.S. Benj. A. Thomas, A.M., M.D., F.A.C.S., and Stirling W. Moorehead, M.D., F.A.C.S. Illustrated with 422 engravings and 21 colored

plates. J. B. Lippincott Co., Philadelphia and London. Price \$7.00.

While on first sight this seems like a rather large work to be used for text book purposes or a working manual, it is nevertheless, doubtful if it could be shortened without the loss of a great deal of practical information. The book deserves a high place among the recently published not only because of the prominence of its authors but because it follows a very excellent tendency that is becoming more and more noticeable of late to avoid a tedious litter of historical and theoretical matter and to discuss more in detail well tried methods and well-founded facts.

THE SURGICAL CLINICS OF CHICAGO, Volume I, Number VI, (December, 1917). Index Number, Octavo 245 pages, 89 illustrations. Philadelphia and London: W. B. Saunders Company, Published Bi-Monthly. Price per year: Paper, \$10.00; Cloth, \$14.00.

There are two very interesting articles in this latest volume on a pressing and timely subject. So much of recent surgical literature is taken up with antisepsis and asepsis that it is refreshing to note that here and there the work of perfecting general surgical procedures and investigating the age old problems of medical art is still going on. One of these problems that is presenting itself in the foreground in these days is that of how to reduce the mortality of prostatectomy and render this a safe undertaking. Such writers as Geraghty and Hugh Young have done much to develop the pre-surgical care of these cases. The contributions of Schmidt and of Bevan in this number of Clinics we think offer some very good suggestions which these experiences lead them to. There are other articles equally interesting and reports of some very unusual cases.

"THE THIRD GREAT PLAGUE." By John H. Stokes, A.B., M.D., Chief of the Section of Dermatology and Syphilology, the Mayo Clinic, Rochester, Minn. Illustrated. Published by W. B. Saunders Co., Philadelphia. Price, \$1.50 net.

Syphilis, a disease shrouded in obscurity, entrenched behind a barrier of silence, spoken of only in repressed tones and if mentioned in public print or speech it is referred to as a "blood-disease," is discussed in an intelligent, commendable manner, by the author for public, lay enlightenment. Few persons realize the dangers of this great black plague. The purpose of this book is to put accepted facts regarding syphilis in such a form that they will become matters of common knowledge. In doing so the author has succeeded, and admirably so. These truths and facts are stated clearly, connectedly and instructively.

The text is not obscured in scientific phraseology.

Pleasing indeed is the author's style and none need hesitate or fear that they will be embarrassed by frank statements. The volume may be presented to either sex without fear of offending the most sensitive. Would that every high school boy or girl, every adult, might read and be possessed of the information.

What of the need of public awakening and education in regard to syphilis? Pause but a moment and consider that it is a conservative estimate that one out of every ten men has syphilis. Twenty per cent. of the young men applying for army enlistment are found to be infected. It is a safe estimate to state that in the United States there are 3,842,526 syphilitics. Need we go farther in presenting reasons for the need of information or education in regard to syphilis? Silence cannot be urged when the impending danger is so great and public health is at stake.

Syphilis and facts surrounding the disease must cross the threshold and be subjected to publicity in no unmistakable terms, and as individuals we must look upon this disease impersonally, as a public menace rather than in the light of one or two examples of it whom we may happen to know.

Syphilis is a dangerous, infectious disease to the individual and society. Syphilis should mean to every man and woman, not a secret, private, shameful disease, but a great, open problem in public health, a problem equally as grave as tuberculosis or cancer, and one demanding co-operative effort to limit and eventually eradicate in future generations.

Without a knowledge of the nature, transmission, effects and ravages of the disease no intelligent effort can be undertaken. It is then indeed a pleasure, after reviewing this book to commend it most heartily as a laudable, initiative in creating a public awakening in regard to syphilis.

PROGRESSIVE MEDICINE: A quarterly review and digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by H. A. Hare, M.D. Volume XX, Number IV. Price \$6.00 per annum. Lea & Febiger, Philadelphia.

On several occasions we have called our readers attention to this publication and have recommended its acquirement by every studious and progressive physician. To us it is one of very few publications that gives the really worth while in medicine and surgery and enables one to become familiar with the better literature as well as assisting to acquire enlightenment on progressive methods of value.

This issue is of intensely interesting discussion of pertinent subjects. The contributors are Austin, Bloodgood, Bonney, Clark, Coates, Coley, Crandall,

Davis, Evart, Frazier, Gerter, Gottheil, Jackson, Landis, Muller, Rehfuess, Ruhrah, Spiller and Stengel. In this issue we find discussed masterly, Diseases of the Digestive Tract and Allied Organs by Rehfuess; Diseases of the Kidneys by Austin; Genito-Urinary Diseases by Bonney; Surgery and especially War Surgery by Bloodgood and Practical Therapeutics by Landis.

Especially do we refer our readers to the discussion of War Surgery by Bloodgood. It is the most valuable summary to date.

We heartily recommend this publication to our readers.

SURGICAL NURSING IN WAR. Elizabeth R. Bundy, M.D. Price 75c. P. Blakiston's Son & Co., Philadelphia.

Received.

A CLINICAL TREATISE ON DISEASES OF THE HEART FOR THE GENERAL PRACTITIONER. By Edward E. Cornwall, Ph.B., M.D. Cloth, 124 pp. Rebman Co., New York.

Received.

INTERNATIONAL CLINICS. A Quarterly. Volume IV, 27th Series, 1917. J. B. Lippincott Co., Philadelphia.

Not up to its usual standard, attempting to advance well known methods of surgery as new methods resulting from the war, primitive in many instances, this issue is a distinct disappointment. It is a waste of time, material and labor to distribute this edition. We look for something more worth while in future issues.

THE TREATMENT OF INFANTILE PARALYSIS. Robert W. Lovett, M.D., Harvard, 2d Edition. Price \$1.75. P. Blakiston's Son & Co., Philadelphia.

Maintaining the value of the first edition, enriched and enhanced in this second edition, the volume is pronounced as one of our valued monograph discussion of a subject that is ever of interest. A splendid work.

MEDICAL BACTERIOLOGY. By John A. Roddy, M.D., Jefferson Medical College, 46 Illustrations. Cloth, 284 pp. Price \$2.50. P. Blakiston's Sons & Co., Philadelphia.

Received.

NEUROSYPHILIS. MODERN SYSTEMATIC DIAGNOSIS AND TREATMENT. Presented in 137 Case Histories. By E. E. Southard, M.D., ScD., Professor Neurology, Harvard, and H. C. Solomon, M.D., Harvard. Cloth, 496 pp. W. M. Leonard, Boston.

The authors present a volume primarily for the general practitioner and secondarily for the syphilographer, neurologist and psychiatrist. It is a broad, modern presentation of the subject based on the studies of numerous case histories and post mortem examinations. It discusses the pertinent

points and features thoroughly as well as showing their relation to the existing pathology and clinical features.

The volume merits cordial reception and is deserving of careful study.

PRACTICAL MEDICAL SERIES. 1917. Volume VI, General Medicine, Billings. Volume VII, Obstetrics, De Lee. Volume VIII, Therapeutics and Preventative Medicine, Fantus and Evans. Price per volume \$1.50. Per series—10 volumes—\$10.00.

Received.

NUTRITION AND CLINICAL DIETETICS. By Herbert S. Carter, A.M., M.D.; Paul F. Howe, M.A., Ph.D.; and Howard H. Mason, A.B., M.D. Cloth, 645 pp. Price \$5.50. Lea & Febiger, Philadelphia.

This is a splendid, complete work. One that must at once command the respect of every physician and create an intense desire of possession. Discussed fully, scientifically and practically are the following divisions: Foods and Normal Nutrition, Foods, Feeding in Infancy and Childhood, Feeding in Disease.

It is a most thorough presentation and imparts just what a man wants to know to help him surmount the intricate difficulties of what and how to correctly advise his patients as to their diet and food consumption.

MILITARY OPHTHALMIC SURGERY. By Allen Greenwood, M.D. and G. E. Schweinitz, M.D. and Walter R. Parker, M.D. Medical War Manual No. 3. Authorized by the Surgeon-General. Leather, price \$1.50. Lea & Febiger, Philadelphia.

This is another splendid manual gotten out by this publisher. It contains in condensed form helpful suggestions to medical officers in ophthalmic problems. Of pocket size it will be found most serviceable and merits our unrestrained approval and commendation.

TECHNIC OF THE IRRIGATION TREATMENT OF WOUNDS BY THE CARREL METHOD. J. D. and Anne Carrell, authorized translation. Introduction by W. W. Keen, M.D. Cloth, 99 pp. Paul B. Hoeber, Publisher, New York. Price \$1.25.

This is a clear cut, concise exposition of the Carrel Technic that enables one to grasp the essential principles of this method. Without a working knowledge of these essentials one cannot hope to attain the benefit and full value of this method of treatment of infected wounds. This volume should be in the hands of every surgeon and physician.

Miscellany

Anasarcin and Anedemin.—These are the twin nostrums of cardiac pseudotherapy. Cardiac disease with its resultant renal involvement is frequently

encountered; and running, as it does, a chronic course, it offers an almost ideal field of exploitation for the typical nostrum vender, who is more familiar with human credulity than with this preparation. Anedamin is said to consist of apocynum, strophanthus and squill with elder—an irrational mixture of three heart drugs with inert elder. Anasarcin has been stated to contain sourwood, elder and squill. Anasarcin is a dangerous remedy in the hands of the average clinician, and its use is at all times to be condemned. In view of the dangers attending the incautious use of any member of the digitalis group of drugs, it is impossible to condemn sufficiently the recommendation that the use of Anasarcin should be continued without cessation until all symptoms of dropsy have disappeared. In the present state of our knowledge of cardiac drugs, it is indisputable that digitalis and tincture of digitalis are best suited for the treatment of cardiac disease except in those few cases in which intramuscular or intravenous administration must be employed temporarily for immediate effect (*Jour. A.M.A.*, Dec. 8, 1917, p. 1992).

Some Misbranded Mineral Waters.—Shipments of the following bottled mineral waters were seized by the federal authorities, and on prosecution declared misbranded under the provisions of the U. S. Food and Drugs Act: (1) Baldwin Cayuga Mineral Water; (2) Bowden Lithia Water; (3) Carbonated Colfax Mineral Water; (4) Chippewa Natural Spring Water; (5) Crazy Mineral Water; (6) Crystal Lithium Springs Water; (7) Gray Mineral Water; (8) Henk Waukesha Mineral Spring Water; (9) Seawright Magnesian Lithia Water; (10) White Stone Lithia Water, and (11) Witter Spring Water. The "lithia" waters (Nos. 2, 6, 9 and 10) were in each case declared misbranded in that they did not contain sufficient lithium to warrant the term "lithia" in the same. A number (Nos. 1, 3, 5, 6 and 11) were declared adulterated in that they contained filthy or decomposed animal or vegetable substances of an excessive number of bacteria. Most of the waters (Nos. 1, 3, 4, 6, 7, 8, 9 and 10) were declared misbranded because the curative claims made for them were found unwarranted, false or fraudulent (*Jour. A.M.A.*, Dec. 1, 1917, p. 1901).

Strandgard's T. B. Medicine.—The resident physician of a Canadian sanatorium states that the Dr. Strandgard's Medicine Company of Toronto, Canada, is attempting to sell its "consumption cure" called Strandgard's T. B. Medicine to Canadian soldiers who are being treated at the sanatorium (*Jour. A.M.A.*, Dec. 15, 1917, p. 2060).

Pepto-Mangan—Physicians having served the purpose of popularizing it, Pepto-Mangan (Gude) is now advertised in newspapers. In consideration of the established facts in regard to the absorption of iron and its utilization, all possible excuse for the therapeutic employment of Pepto-Mangan, in place of iron, has vanished. False claims regarding the efficiency of the preparation have been circulated by its promoters, and about years ago the Council on Pharmacy and Chemistry reported that while the statements were no longer made, they had never been definitely admitted to be erroneous by the Breitenbach Company, and that Pepto-Mangan was then being exploited to the public indirectly. From a reading of the present advertisement in a medical journal, one can only suppose that this was intended to mislead physicians. The physician who prescribes Pepto-Mangan as a hematinic shows ignorance of the most rudimentary facts of iron therapy, and the intelligent patient soon perceives his limitations. "Useful Drugs" contains a list of iron preparations that are suitable for all conditions that call for iron. William Hunter discusses the subject of anemia and its treatment at considerable length in "Index of Treatment," Edition 6, p. 17-37, and gives many prescriptions containing iron for use under different condition. (*Jour. A.M.A.*, Dec. 29, 1917, p. 2202).

The so-called fractional method of gastric analysis advocated by Rehfuess has been found to have such advantages that it has been introduced in the Battle Creek Sanitarium, where test meals to the number of thousands are given each year. To the patients, the new plan is vastly preferable. Indeed, the swallowing of what was often called "the garden hose" was attended in most cases by actual suffering and in many by severe pain. Under the fractional method, a very small tube is used. An oval tip, made of metal and perforated, makes the swallowing easy. Of course, it is inconvenient to have to sit for an hour and a half or two hours without removing the tube, but there is no real distress. The usual test meal of two slices of toast and a glass of water is given, at intervals of half an hour, a small specimen of the gastric juice, 10 or 16 C. C. is taken, until the acidity curve begins definitely to come down.

Under the old method, the practice was to take out all the gastric juice at the end of an hour. At Battle Creek, the period had been lengthened to an hour and a quarter because this was found to be the usual time of greatest acidity. A comparison of the two methods shows that the original plan was misleading in many instances. Under that procedure, cases would be set down as normal if the acidity was shown to be at the usual percentage one hour after the meal. However, as the fractional method proves, many patients who have the right acidity at that minute, many have far too little or too much, before and after the hour has passed. By studying the complete cycle of digestion, an accurate diagnosis may be made.

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVII

GRAND RAPIDS, MICHIGAN, MARCH, 1918

No. 3

Original Articles

ROENTGENOLOGY AND THE INTERNIST.*

CHARLES D. AARON, Sc.D., M.D., F.A.C.P.
DETROIT, MICH.

Roentgenology is still in an active stage of evolution and bids fair to remain so for a considerable time to come. However, having passed through the storm and stress of its early history, the science has acquired a definite significance which commands universal professional respect, and a quality of positiveness which renders it a valuable aid in both diagnosis and treatment of disease. Colleges have introduced the study of the subject, and the laboratory of Roentgen diagnosis and treatment has become one of the essentials not only of every well equipped hospital and kindred institution, but even of methodic office practice. Still, its service to the medical profession is not what it might be with more perfect technic and a better correlation between the science of roentgenology and the science of medicine.

One of the stumbling blocks in the way of its progress is the lack of uniformity in technical details. For example, there is no generally accepted standard test meal preceding the roentgenologic observation of the gastrointestinal tract. Not only do the test meals in different countries differ, but various authorities in the same country have been unable to agree upon a standard. A comparison of the findings of different men in different offices, institutions and countries is impossible unless a standardized test meal is used, together with a standardized technic of administration.

Another reason why internists have looked askance at the intrusion of roentgenology upon the domain of diagnosis is that they rightly object to the idea of roentgenologic examination displacing the ordinary routine diagnostic methods. All roentgenologic findings are, however, only placed in the hands of the clinician

for what they may be worth. They will serve to direct his attention to the probable presence of conditions which have not yet advanced far enough to produce clinical symptoms. But in view of the fact that the Roentgen ray furnishes only shadows which have to be interpreted, and not complete reproductions of actual pathologic facts, no roentgenologist worthy of the name would think of suggesting that his findings should take the place of a regular clinical examination.

Another point of the utmost significance is that in order for the roentgenologist to make the examination and interpret the shadows correctly, he must have a thorough knowledge of pathology and must also be a good clinician because the roentgenographic findings must be correlated with the clinical history and the present condition of the patient. Correct interpretations cannot be made except in the light of accurate knowledge of larger subjects—anatomy, physiology, histology and pathology. The roentgenologist who is insufficiently versed in the intricacies of the anatomical, medical and surgical requirements, or who is inexact in the practical application of his knowledge, must yield the field.

These demands, of course, do not apply to the assistants employed in a large roentgenologic laboratory, who need only to be good technicians. In other words, there are two phases to be considered in the problem of turning roentgenology to successful account: the brain of the physician who directs the proceedings and interprets the findings, and the technician who carries out the instructions. This situation naturally suggests the desirability of every physician being able to act as his own roentgenologist, when as a matter of fact very few clinicians have a sufficient knowledge of the roentgenologic theory and practice to justify their attempting an interpretation of a series of plates.

The many instances in which interpretation is easy should not mislead us into indolent credulity. Gastric pathology is a case in point. It

*Abstract of paper read before the American Congress on Internal Medicine at Pittsburgh, December 27 and 28, 1917.

is not difficult to recognize, in autopsy or at operation, definite lesions or pathologic alterations, such as an hour-glass stomach, perforating gastric ulcer, or pyloric obstruction; but in the clinic identical symptoms may be due to stomach disease or, for example, to cholecystitis or chronic appendicitis. Therefore the primary lesion must be found, if possible, and it is the business of the roentgenologist to make out certain identifying marks that will indicate the cause of the patient's symptoms. Some of his problems may indeed be difficult, for the pathologic process may be in the gall bladder, in the appendix, or in the colon. Here he can show his experience as an observer, and also his technic in application.

All this points to the supreme desideratum—standardization. Both the methods and the technic need it, the more so since Roentgen diagnosis has, after all, its limitations as well as its possibilities. It is to be regretted that, as none other, this new specialty allows such diversities in technic and such variations in the conclusions from the findings.

The successful application of the Roentgen ray is largely dependent on the relative position of patient and Roentgen tube. The visualization of certain shadows depends upon this very fact, as for instance in the localization of foreign bodies, gallstones, fractures and dislocations. Thus the individual skill, ingenuity and experience of the roentgenologist must determine the technic. The personal equation is and will remain a deciding factor in the success or failure of a roentgenographic examination. However, this does not do away with the further fact that the work of the expert would be more expert, and the altruistic value of his work to the community immeasurably enhanced, were the general trend of his work based on standardized principles, so that the results could be intelligently scrutinized, compared and repeated.

Standardization is required in many other important points connected with roentgenology in addition to test meals and the position of the patient under examination, but the object of this paper is rather to call attention to this requirement on general principles than to go into technical details. Among the latter may be mentioned the deplorable absence of a standard of measuring the dosage, and the quantity and quality of the rays to be employed in a given case. While suggestions have been made along these lines from time to time, the roentgenologic section of the profession is slow in discussing, accepting or rejecting them with a view to arriving at anything like standardized

procedures. This is not due to indolence or apathy, but probably to a realization of the fact that their experience has not yet sufficiently matured to justify the adoption of more or less irrevocable plans. But this very consideration should be an incentive to increase and perfect their experience, and this much-desired result can only be won by a universal comparison of results and, consequently, by standardization of the important steps bound up in the practical application of the art.

PROPHYLAXIS OF VENEREAL DISEASE.

FRANK R. STARKEY, M.D.
DETROIT, MICH.

The present article was inspired by an address delivered by Dr. Guy L. Kiefer of the Michigan State Board of Health at a recent meeting of the Wayne County Medical Society, in which he discussed the prevention and control of venereal disease and particularly described the laws of Michigan pertaining thereto.

The question of regulating prostitution and preventing venereal disease is among the oldest in medicine and sociology, yet it is of a peculiar vital interest at this time because of its close relation to the forces of our army and navy. Since time immemorial there have been spasmodic attempts in all of the civilized countries to suppress vice; meaning by that word, especially, prostitution and illicit sexual congress, and these campaigns have usually been initiated and fostered by religious organizations of the various denominations, the question being considered chiefly from the standpoint of morals. The almost universal prevalence of venereal disease today is sufficient testimony to the inefficiency of this angle of attack. A very similar attitude prevailed for many years relative to the temperance question and with almost equally negative results. Within comparatively recent years and especially since the beginning of the present war the economic importance of the question of alcoholism has assumed the ascendancy with the result that, today a very large portion of the civilized world has declared for a prohibition of the manufacture and sale of alcoholic beverages and universal prohibition seems to be almost an accomplished fact. The problem of regulation of prostitution and prevention of venereal disease is intimately related to that of intemperance. They each form a part of a vicious circle. It is not desirable or necessary to go into detail here concerning the far

reaching influences of these vices upon the body politic. They each draw their recruits from all walks of society and are the chief source from which the lowest levels are supplied. It is unnecessary to enumerate the manifold ways in which the financial burdens of the state are increased through the loss of earning power and the maintenance of institutions, penal and otherwise, for the care of these victims, but just now this has a more important significance than ever before and we must lay aside all petty and antiquated ideas which may be prompted by prudery, hypocrisy or lack of understanding for we are engaged in a war, a mighty struggle is on, the outcome of which will decide whether or not the world shall be a fit place in which to live. It is time for broad minded patriotism and submergence of individual convenience. We are recruiting an army which will be composed of the sturdy youth of our country. These men are being brought up to the highest possible physical and fighting condition by the most modern, scientific methods and one of the greatest obstacles in the way of this work is the spread of venereal disease and it is only by the most strenuous regulations that it has been kept within bounds in our army cantonments. In the European armies the devastation from venereal disease is so terrific as to be appalling. Therefore, we can without hesitation look upon this matter from an economic standpoint due to these facts alone and must remember that in dealing with the question of venereal disease we have to do with the sex instinct which is, beyond doubt, the strongest instinct in nature; reaching as it does through the animal, vegetable and even the mineral kingdoms. For in certain of our crystal forms sex affinities undoubtedly exist. Self preservation is often spoken of as the strongest animal instinct. This, however, is an error, for the preservation of the species, which is back of the sex instinct, far outweighs it in strength and importance. This great impulse has dominated animal, vegetable and mineral life since the world began. Before morals and ethics were invented the sex impulse held sway and so long as the world exists it will continue to do so and to attempt to suppress or circumvent it by surrounding it with artificial, man-made laws or rules of morals is nothing less than flouting nature and the sooner we realize this the better it will be for the progress of sex hygiene. I wish, however, that it be distinctly understood that I have no desire to advocate the letting down of moral bars or encourage indiscriminate sexual indulgence, but

we must realize that this impulse which nature has taken such pains to give prominence cannot be regulated out of existence by either church or state, therefore, we should attempt to make it as free from harm as possible and the methods advocated by the State Board of Health and made compulsory by the recently enacted law for the regulation and control of venereal disease will, I believe, do much in this direction for it is reasonable, practicable, does not inflict undue hardships upon either patient or physician and does not necessitate the violation of the confidences of the patient. The advisability of the use of prophylactic measures in the way of antiseptics, etc. has been discussed and its propriety been disparaged by certain sociologists on the ground that it would be contributing to an immoral act to place at the disposal of individuals, who illicitly indulge themselves sexually, agents which would prevent the contracting of venereal disease. I believe that the moral aspect of this question should be entirely eliminated, for we must realize it only defeats our purpose to stigmatize it as something to be ashamed of, besides there is a by no means insignificant group of cases who contract venereal disease innocently and their relation to the community from a hygienic view is in no way different from cases in which the disease is contracted illicitly. The potentialities of these individuals as disease spreaders are frequently not less than those acquiring it by illicit methods, as their very innocence prevents them from using the ordinary precautions. We as physicians have much to do with the moral development and standards in the community in which we live, for we come into the closest possible contact with the inner circle of the home and have revealed to us, as to no one else, the family skeleton and the most intimate secrets pertaining thereto and our opportunities for moral upbuilding are not surpassed by even those of the clergy, and to our credit it may be said that we are seldom remiss in our appreciation of the gravity of this sacred obligation. However, venereal diseases are contagious diseases and should be looked upon purely from the standpoint of hygiene, sanitation and economics, just as measles, scarlet fever and small pox, and, until we eliminate any stigma that would bring shame to the individual that is afflicted by this contagion, we cannot expect to have the full whole hearted co-operation of either the public or the profession. Although it may be truly said that there is a difference between ordinary contagions and infections and those due essentially to sexual disease, in as much as the in-

dividuals affected with the latter voluntarily transgress the bounds of social propriety in exposing themselves, there is nothing in this difference which should place these victims in a class by themselves or absolve them from their duties to the community, but, on the contrary, I believe, in as much as there is an element of volition in their case they should more willingly submit to any regulations that would prevent the spread of the disease and their relation to the body politic is in no way different from that of sufferers from other contagious or infectious diseases, unless it be that their danger to the community is much more far reaching.

We should have the courage to make a stand in this matter and strip the subject of the stigma of shame and deal with it simply as we do other contagious diseases, for no amount of preaching and no amount of education will revolutionize nature to such a degree as to prevent young healthy males from indulging this overwhelming impulse which has been instilled into the innermost recesses of our being for a very definite and essential purpose. Therefore, we should give our most hearty co-operation to the State Board of Health of Michigan in reporting all cases of venereal disease that come to our notice so that they can be properly hospitalized and treated until the danger period of infection has passed. There will, of course, arise in this matter, as they do in all other important attempts at progress, a small minority of objectors just as in the question of controlling other contagious diseases and vaccination and vivisection, but these antis can be safely ignored as their objections are either not well grounded and due to lack of information or based upon purely selfish motives.

LEUKAEMIA.*

CHARLES T. Foo, M.D.
ST. JOHNS, MICH.

One of the best authorities, Osler, gives the following definition: Leukaemia is a disease characterized by a permanent increase in the leucocytes or white cells of the blood, associated with hyperplasia of the leucoblastic tissues.

Formerly there were three varieties given, namely, the splenic, lymphatic, and medullary. Now we are told that the leucoblastic tissues may start in any part of the blood, glandular system such as, in the bone marrow, lymphoid glands and perhaps in the spleen. Consequently

now they are recognized as first the myelocytic or myeloid, which corresponds to spleno-medullary. The pathology or morbid anatomy in this variety the spleen is greatly increased in its size, the capsule may be thickened and the vessels at the hilus enlarged so that the entire weight of the organ may be between two and eighteen pounds. The spleen shows the condition of a chronic hyperplasia. It cuts with resistance, it has uniformly reddish brown color and the Malpighian bodies are invisible. Grayish white, circumscribed lymphoid tumors may be present throughout the organ, contrasting strongly with the reddish brown matrix. Instead of a fatty tissue the medulla of the long bones may resemble the consistent matter which forms the core of an abscess or it may be dark brown in color.

As regards the etiology—the exact cause is still undetermined—but this disease may occur in patients who have a tendency to hemorrhage; it may also occur during pregnancies, or may be caused by traumatism. The disease is rather more common in males than in females between the ages of thirty and fifty years.

As to the symptoms—the oncoming of the disease is rather insidious and the patient seeks the advice and medical aid of a physician concerning the gradual enlargement of his abdomen and shortness of breath. He also complains of the pallor, palpitation and other signs and symptoms of anemia. Epistaxis is common and frequent as well as other tendencies of hemorrhage. The gradual increase in the volume and size of the spleen is the most prominent feature in the greater number of cases. Pain and tenderness upon palpation are common though the progressive enlargement may be painless. The enlarged organ extends downward to the right, and may be felt just at the costal edge and it may also extend as far as to the naval. I have, myself, had under observation lately a patient whose spleen extended to the right and downward almost to the pubes and a handbreadth beyond the naval. In some cases the enlarged spleen occupies fully one-half the abdomen reaching the pubes below and extending beyond the middle line.

Auscultation—sometimes a murmur may be heard over the spleen. The pulse is as a rule rapid, soft, compressible, but often full in volume.

Blood picture—in all forms of the disease the diagnosis must be made by the examination of the blood. The striking change and increase of the leucocytes the average ratio to the ery-

*This paper was read November 1, 1917, at the Clinton Medical Society meeting.

throcytes or red cells is one to ten, sometimes one to five or may even reach one to one. Dr. Osler says that in this series his white cell count runs 298,700 per c.mm.; 500,00 per c.mm. and sometimes they may rise above 1,000,000 per c.mm.

The increase is in all forms the polymorph-nuclears go to make up from 30 to 50 per cent. both small and large lymphocytes are increased in number, the eosinophiles and the mast cells show both a percentage and absolute increase. The abnormal cells may be present are these: Myelocytes 30 to 50 per cent, normoblasts and megaloblasts are common. There is no anemia at first, the red count may be normal but sooner or later anemia comes on and the count may fall to 2,000,000 per c.mm. The color index is usually low and the blood platelets are as a rule increased.

There were two cases of this type came to St. Johns hospital.

CASE 1. Mrs. D. A., September 4th, 1916, age 64. came in with great distress in her abdomen. She could hardly climb the steps without the assistance of two men. She complained of bloating and pain in the left side of the abdomen and the pain radiated to the shoulder. This enlargement, or rather bloating as she called it, has been coming on insidiously for the last two years.

On inspection patient had a large abdomen fairly well nourished and somewhat anemic in her appearance. On palpation the abdomen is tense and rigid all over especially the left side. It felt as though there was an enlargement of an organ which extended up to the naval and down to the pubes. Patient complained of considerable pain when pressure was made upon the abdomen. On auscultation nothing definitely ascertained. The heart is irregular, pulmonic second sound is louder than usual. Lungs showed normal vesicular breathing. Temperature 100 degrees F. Pulse 98 and respiration about 28. Never complained of any stomach trouble. Urine is negative. Blood picture showed the following:

Leucocytes 281,200 per c.mm.
Erythrocytes 2,416,000 per c.mm.
Haemoglobin 80 per cent.
Large lymphocytes 40 per cent.
Small lymphocytes 20 per cent.
Poly-Neutrophile 40 per cent.

Eosinophile present, abnormal cells are basophiles, myelocytes nomoblasts, microcytes, anisocytes and poikilocytes, color index is lower than usual. Blood pressure 140 mm.

CASE 2. Mr. E. T., age 32. This patient was brought to the hospital on a stretcher November 12, 1917. His condition was very much worse than the case I mentioned above. His spleen was very much larger and all he could do was to get his breath while lying in bed. The abdominal enlargement had been gradually coming on for about one and a half years, he claimed this disease was brought on by an injury. His blood picture gave the following findings:

Leucocytes 515,000 per c.mm.
Poly-Neutrophile 37 per cent.
Large lymphocytes 47 per cent.
Small lymphocytes 12 per cent.
Eosinophiles 4 per cent.
Haemoglobin 80 per cent.

The other abnormal cells were present about the same as those of Case 1.

As to treatment—as far as known various remedies and drugs have been employed and prescribed in this disease but so far we found benzol X to XX minims, three times a day taken in milk. Liquor potassii arsenitis or Fowler solution given in gradual increasing minims doses are also useful and beneficial. Cacodylate of sodium, gr. V to VIII every other day hypodermically. The best result and most effective treatment is procured by massive X-ray with the Coolidge tube which is to be given at the beginning once in 4 days and as the patient improves the X-ray is given once a week and then once in two weeks. The most essential thing that we must impress upon the patient's mind is that the treatment especially the X-ray must be continuously kept up, for according to the Mayos' the disease will return and become worse if the treatments are discontinued. Of course diet, fresh air, are important as a part of the treatment but they are only secondary.

Second. Lymphoid leukaemia.

There are two forms: Acute and chronic.

Acute form is one of the most terrible of all the blood diseases, the early symptoms are angina frequently of an ulcerative type. Tonsils and pharynx may be involved, profuse nose bleeding. Glands of the neck are swollen and there are other glandular enlargements. The patient becomes anemic rapidly and may have a marked fever of 103 or 105 degrees F. Death has occurred as early as the seventh day.

The chronic form is not as fatal, usually comes on later in life, and starts with a general enlargement of the lymph glands, first those of the cervical, then the axillary. The spleen may be slightly enlarged and the anemia eventually comes on and the disease may last for years.

Blood: The smear of a drop is rather sticky and spreads with difficulty. The most remarkable feature is the increase of lymphocytes, which are very often above 90 per cent and even higher. The total white count is rather high, may rise 30,000 or 40,000 per c.mm.

Under this variety there was a patient who had this type as well as that of the above, came to the hospital for treatment two years ago, December 1st, 1915.

A man of 66. The cervical and axillary glands were very much enlarged. First blood examination showed the following:

Leucocytes 423,500 per c.mm.
Erythrocytes 3,912,000 per c.mm.
Poly-Neutrophile 1 per cent.
Large lymphocytes 3 per cent.
Small lymphocytes 96 per cent.
Haemoglobin 60 per cent.

Basophiles many, few myelocytes, megalocytes and a few poikilocytes. With the same treatments as those mentioned above the patient is still living today. The enlarged glands and spleen have nearly all gone back to their normal size, and the next blood count shows:

September 10, 1917—

Leucocytes 24,800 per c.mm.
Poly-Neutrophile 6 per cent.
Large lymphocytes 9 per cent.
Small lymphocytes 85 per cent.
Haemoglobin 85 per cent.

Last Examination December 22, 1917—

Leucocytes 12,100 per c.mm.
Eosinophile 1 per cent.
Poly-Neutrophile 22 per cent.
Small lymphocytes 62 per cent.
Large lymphocytes 15 per cent.
Morphology of Reds normal.

As far as we know this patient is enjoying good health at present.

No doubt we, as medical men, all realize that leukaemia is rather a rare disease which we do not see or meet every day in our daily practice. I am very much impressed with this disease because of its rarity, its importance in regard to its successful treatment, which if it is diagnosed when the patients come to us for relief and cure. I hope we all may receive some benefits from this little discussion I have read in your hearing, so that we all may be able to handle such a disease with more intelligence in order to increase the reputation of our every day practice as well as to add to the reputation of our medical profession at large.

WHAT THE MEDICAL PROFESSION OWES THE COUNTRY.

MAJOR LEWIS WINE BREMERMAN, M.R.C.

Director of Field Hospitals, 310th Sanitary Train, 85th Division, N. A.

CAMP CUSTER, MICH.

The country has called for its medical men and the medical men have answered that call to the extent of about 14,000.

The country will need more than 22,000 medical officers to fully equip the present contemplated army. If it becomes necessary to have an army of several million it will require the services of many thousands more.

Will the medical profession respond to that call?

There is no doubt they will, if the demonstration of patriotism already shown continues. There are many physicians who did not answer the first call who will cheerfully respond to the second if the Surgeon General gives that call.

There have been many who had so many obligations of a domestic and business nature that the sacrifice would have been such that it would have produced untold hardship and would have left their families in actual want, if they had left home and business at the first call. There are many men now who have had ample time to arrange their affairs so that they can enter the service at this time. Every medical man in America who is physically fit between 21 and 45 years of age should be ready to respond to a call for duty at a moment's notice. If they are not ready, then they certainly lack patriotism. A medical officer must not think of self, of family or of practice—his one thought should be his service to the country.

A large number of the men who are now in the service and who answered the nation's first demand for doctors were men of international reputation, men who had the most to give up; men whose financial loss represented many times more than they receive as pay even in the highest ranks. A fair majority of the men found it necessary to fall back upon their own means to be able to defray expenses. Does this not show true love for country and true unselfishness? Should this not be an example for many other men to follow?

Many of these men were well past middle life. The younger men, I am sorry to say, were among the minority. It is the younger men that are needed now, men full of vigor and who can stand the strenuous life expected of them, men whose knowledge of modern medicine is still fresh with only the need of the proper stimuli of actual experience to make great men of them. What greater stimuli could be given than the thought of duty well performed and what

greater experience can a man expect to obtain than the work he will get behind our army in France.

The older men in the profession should be left at home; they have a humanitarian place to fill in performing their duty in looking after those left at home. There is no doubt that these same men can do their bit for the nation. There will be a great amount of work to be done in convalescent camps that may be established in this country. Most men even busy with private practice can give up part of their time in looking after this work. If called upon for this work, it would relieve from duty others who could be more valuable in other organizations.

The Government will need its doctors and will need them badly. It is the duty of every one to offer his services to the country. In Germany when the army has such a call, the Government orders the doctors to join the colors—and they go. The Government at Washington has faith in the medical profession and there will be no occasion to follow the example of Germany. Many men have expressed the opinion that they cannot see the importance of months of training for medical officers and would gladly enter the service if they did not have to go through a long course of training. How absolutely absurd this thought. One might as well say that they can practice medicine and surgery without a thorough preliminary training in a medical school.

The medical officer must first of all qualify as a soldier and to become a good soldier he must have a long training period. He must learn discipline, obedience to orders and must be fully cognizant with military affairs. The Government takes for granted his medical and surgical ability, yet there is much to learn that the ordinary practicing physician never dreamed of regarding war surgery which can only be learned in training courses given by men of experience. There is not a man in the Medical Reserve Corps today who is on actual duty who regrets the months he spent in training. This training has increased his efficiency.

It is as important for the medical officer to know how to command men as the line officer. He may be assigned to duty as a commanding officer with hundreds of men under his control and unless he is familiar with military tactics

he will be at a loss when the time comes to handle his men in an emergency.

The Medical Officer must be instructed in and become familiar with the work of the regimental detachment, the field hospital, the ambulance company, the evacuation hospital and the base hospital. The units are all independent organizations and the work differs considerably.

Without a thorough training in the military elements of these organizations an officer may suffer considerable financial loss. He may be responsible for thousands of dollars worth of property and without the knowledge of the proper care of medical and other property, losses may occur which may be difficult to explain. The Government wants either the property or its equivalent unless the loss can be satisfactorily explained.

The routine executive work necessary to the satisfactory and perfect running of any of these organizations is considerable and at first sight looks like an unnecessary amount of cumbersome red tape.

There is no doubt that considerable of the paper work of the medical department could be so revised as to simplify it and cut down to a marked degree the work which is duplicated in many instances.

Red tape is necessary and it spells good business methods, yet too much may clog the wheels of progress to the extent of minimizing the efficiency of an organization. A complete understanding of the paper work of the medical department is necessarily essential and accuracy can only be obtained by an absolutely definite knowledge of this work.

One must have actual experience with the various methods and technic of this paper work. It is all but impossible to obtain this knowledge from books. Again the necessity for the months of training for the medical officers. This work must be thoroughly mastered before one can expect to command an organization independently without aid of regular army officers.

Here at Camp Custer there is only one regular army officer in the medical department—the Division Surgeon. Even his work is new for the work of a division in itself is new. The work of a Division Surgeon is colossal. Can you imagine the pandemonium which would

exist if all the medical officers in the division came immediately from civil life and had no training whatsoever. The machinery of the medical department of the division would be so "gummed up" that work would be at a standstill and inefficiency would reign supreme. Again the reason for much preliminary training for the medical officer. Many Reserve Corps men must fill positions requiring executive ability and knowledge of medical affairs, as there are not sufficient men of the regular army medical corps to go around.

Let all medical men who read this article and who have thought that preliminary training is unessential remember that it is absolutely necessary for a medical officer to qualify in the following, for their efficiency will be judged thereby. The medical officer must have at least a fair working conception of all drills. He must know how to make inspections. He must be familiar with equitation in all its branches; he must know how to saddle, bridle and care for animals, whether they be horses or mules. He must be able to give his men instruction in pitching of shelter, pyramidal, wall and hospital tents. He must have a knowledge of the personal equipment of the sanitary troops, together with the field and surplus kits and care of equipment. He must be able to instruct his men in first aid, using soldiers' equipment only. The methods of examination of recruits, including the paper work and finger prints is essential knowledge. The medical officer must know the nature and employment of regimental supplies, the customs of the service and the relation of the medical department to the rest of the army. He must have an excellent working idea concerning the general organization of the medical department for war and the general organization of military forces. The Manual of the Medical Department and Army Regulations must be his Bible and Prayer-book.

He must be a sanitarian and hygienist. He must know the Field Service regulations, paper work and the medical department, map reading, the use of the compass as well as orientation and road sketching.

How can he run a regimental detachment, an ambulance company, a field hospital, an evacuation hospital or base hospital, hospital trains, hospital ships, convalescent camps, contagious disease hospitals or camp infirmaries

without a complete knowledge of the use and internal administration of each.

He must have at his finger ends the tactical use of the infantry, cavalry, field artillery, signal corps, engineer corps and quartermaster depot in relation to the medical department.

He must have a full and complete understanding of the paper work relating to the quartermaster and ordnance departments and must have a thorough working idea of the medical department in campaign, the principles of sanitary tactics, map problems, war games and the methods of handling rations and mess management.

The manual of courts-martial, Articles of War, the Geneva and Hague conventions and the rules of land warfare should be thoroughly understood and familiarity with the same is essential. He must know all concerning modern military surgery, poison gases, their nature and treatment, shell shock, war psychoses and neurosis and malingering.

He must have an accurate conception of trench warfare, trench foot and trench fever and other diseases concomitant with this style of warfare. He must be thoroughly conversant with the organization, functions and limitations of the American Red Cross and the civil sanitary function of the army medical department in occupied territory.

He must be able to plan tactical walks and rides, make sanitary inspections and formulate practice marches and bivouacs.

This scheme seems appalling at first sight, yet if the fundamental factors in the medical officer's training are well learned, the balance becomes relatively easy, as the work dovetails nicely.

New features and new problems in this new warfare are continually rising and must be thought out and developed as we go along. No one knows what may happen next. Will it be some new medical or surgical problem made necessary by some fiendish invention of the ruthlessness of the German system or will it be the formation of a new organization found to be more useful as our knowledge of modern war develops?

When the medical officer leaves his training, assigned to duty as a commanding officer of some medical organization whether it be a regimental detachment, field hospital, ambulance

company or what not—he will find his work varied and interesting. He will find there are hardly hours enough in the day to accomplish all that he is expected to accomplish. He must study and plan for he is responsible for the conduct of his junior officers and of his men. He must have at his finger end the information that any inspector may request. Excuses are unpardonable. He cannot excuse himself because one of his own officers is inefficient. That fault is his own and must be remedied.

Do not think for one moment that you can “bluff” a competent inspector. It can’t be done, for usually he is an old hand at the game. You will be expected to qualify in any of the following:

All of your officers are expected to qualify in equitation. They may have to prove it. Their inefficiency may be laid at your door. Do all of your officers carry themselves at all times as gentlemen and do they exhibit proper soldierly qualities?

Does perfect harmony exist among your officers? If not, why not?

Is there any officer incapacitated for duty, either mentally morally or physically? Have there been any serious breeches of discipline on the part of officers or men? Have there been complaints of injustice or unfair treatment? If so, have they been thoroughly investigated? Have all officers of your command provided themselves with uniforms and equipment? Are ambulances fully equipped and frequently inspected? Does the commanding officer (line) with surgeon make frequent visits to men’s quarters, hospital, guard house, mess rooms and other buildings and rooms used by enlisted men? Are any men habitually excused from military duties?

What extra and special duty men are excused from roll call, drill, inspection, etc.? How often, and why?

Are enlisted men permitted to leave camp to engage in pursuits, business or performance in civil life for hire when same shall interfere with employment of local civilians?

Are Government funds, keys of safes containing same and keys of storehouses and chests intrusted to enlisted men or civilians?

Are such funds transferred with the officer who is custodian who is absent for more than

ten days, or left on memo receipt if he is absent beyond three or less than ten days?

Are company fund accounts frequently inspected?

Is Army Regulation No. 132 and General Order No. 45, War Department 1914 as to forfeiture of pay and allowances and making good time lost during absence without leave and from duty on account of disease resulting from soldier’s own misconduct, strictly complied with?

Is all public property sheltered, guarded, preserved, issued and used in the proper way?

Is the sanitary condition of the command properly looked after?

Are sanitary regulations published in General Order No. 45, War Department 1916, observed?

What is the general health of the command? What diseases, if any, are particularly prevalent in the command?

Is the command thoroughly vaccinated against small pox and immunized against typhoid and paratyphoid fevers?

Are thorough physical examinations of all enlisted men (except married men of good character) made twice monthly?

What percentage of the command is sick at present?

Are the sick properly cared for?

Are proper rules carried out to see that each patient gets the medicine prescribed for him?

Are hospitals in good shape in every department and from every angle?

What fire precautions are taken?

Are surgical instruments and medical supplies on hand of good quality and in sufficient quantities? Are active poisons, alcohol, alcoholic liquors and all habit-forming drugs kept under lock and key?

Are all field chests and equipment in perfect shape and ready for immediate field use?

Are ambulances, trucks and wagons fully equipped, in perfect order and under the care of drivers regularly designated?

Does a medical officer personally make a diagnosis in the case of each patient admitted to the hospital?

What instruction is given in first aid, litter drill and sanitary work and nursing?

Can the enlisted men ride? What instruction is given in the care of animals and equitation?

Are horse equipment properly cared for?

Are all records properly kept?

Is correspondence book with index properly kept?

Are mess accounts watched and checked carefully?

Is all equipment complete and servicable?

Are all officers thoroughly instructed in the keep of company records?

Are the sanitary and hygiene conditions of the men properly looked after?

Are the feet and teeth of men properly inspected. Are the men properly measured and fitted with shoes?

Is the tentage kept by the organization properly cared for and in a serviceable condition?

Is the supply of clothing sufficient?

Are cooks competent?

Are all members of a motor company capable of acting temporarily as chauffeurs? The same holds true for drivers of animal drawn teams.

Are duties prescribed for members of motorized organization performed by the respective members of each organization?

Are thorough semi-weekly inspections made of all motorized transportation regarding all parts of motor and car?

These are the more important factors inspected by an inspector as laid down by Major Brinkerhoff, Inspector General of 85th Division.

If an officer feels that he can come through "clean," he can qualify as an efficient officer.

All of the conditions are cited simply to demonstrate conclusively the unpreparedness of the civilian doctor and how necessary it is for training, so do not wait, thinking that you can

go immediately from your office into the command of an organization, but make application immediately for a commission in the Medical Reserve Corps. Do not hold back, looking for high rank. Be satisfied with what your government gives you. Remember that it is not always the man who starts out with the high rank who becomes the most efficient officer.

I have seen Majors that were left at the post as far as important work and position of trust were concerned.

I have seen Lieutenants become Majors after a few months of work due entirely to their untiring zeal and the knowledge they had accumulated in training utilized with the highest results.

Advancement will, without a question, be rapid but will depend entirely upon the man himself.

To win the war we must have organization and team work. To obtain organization and team work every individual must lend his zealous support. The medical profession must offer a large number of its men. The medical department should be perfect as should every other department and it is up to the medical man to make it so. We will win this war without question, but we must have the co-operation of all of our resources. The medical profession must make tremendous sacrifices. Are they ready to do this? Experience has proven that they are! When the country calls, fellow members of the medical profession, put aside all thoughts personal in character and give yourselves unselfishly to your country's needs. This is what the medical profession owes the country.

PROPAGANDA FOR REFORM.

Hemo-Therapin.—The Council on Pharmacy and Chemistry reports that, according to the Hemo-Therapin Laboratories, New York, Hemo-Therapin is a "combination of highly refined creosols and phenols (which have been detoxicated by special processes) with salts of iron, potassium, sodium, phosphorus and calcium in minute but physiologic proportion—the solution as a whole being designed to approximate closely in various fundamental details the chemistry of the blood." No statement is made, however as to the quantities of the several ingredients, nor is any information given as to the identity of the "creosols" and "phenols," or as to

the nature of the processes whereby these are "detoxicated." The Council explains that the Hemo-Therapin Laboratories ask physicians to believe that the occasional intravenous administration of this liquid will benefit or cure a long list of ailments, including erysipelas, septicemia, pyemia, puerperal infection, malaria, pneumonia, typhoid fever, diabetes, chronic Bright's disease, goiter, arteriosclerosis and locomotor ataxia. The testimonials which are presented for the claims bear a striking likeness to those found in "patent medicine" almanacs. One of the cases is a woman who was bitten by a snake seventeen years ago and who, on the anniversary of the bite, suffers severely from the original bite. (*Jour. A.M.A.*, Jan. 5, 1917, p. 48).

TRANSACTIONS
OF THE
Clinical Society of the University of Michigan
Stated Meeting, December 5, 1917

The President, JAMES G. VAN ZWALUWENBURG, M.D., in the Chair
Reported by REUBEN PETERSON, M.D., Secretary

TIC DOULOUREUX AND ITS TREAT-
MENT WITH A REVIEW OF THE
CASES OPERATED UPON AT
THE UNIVERSAL HOS-
PITAL IN 1917.

MAX M. PEET, M.D.

(From the Surgical Clinic, University Hospital, Ann Arbor,
Michigan).

Neuralgia of the trigeminal or fifth nerve is much more common than neuralgia of any of the other nerves in the body. Three types are commonly considered. 1. Neuralgia minor, which often appears in the course of common diseases, such as colds, rheumatism and gripe, or following exposure, and is naturally more frequent in the fall, winter and spring. 2. Reflex or symptomatic neuralgia, often and probably correctly included under neuralgia minor, is found in cases of malaria, anemia, pregnancy, hysteria, sepsis, disorders of the stomach, acute intestinal infections, eye conditions, such as defective accommodation and astigmatism, accessory sinus diseases, and carious teeth. The last is probably the most common cause. One of the most frequent of the minor neuralgias commonly complained of is the sudden sharp pain on the side of the face and forehead which appears when drinking cold water or eating ice cream. The pains associated with the above neuralgias are usually relieved by hot applications, menthol, aspirin, and the relief of the disease giving rise to the irritation. 3. Neuralgia major or tic douloureux. This is the severe type which is practically intractible to ordinary treatment, is apparently not dependent on any previous coexisting disease, and is one of the most terrible afflictions which can come to a man, the pain being so fearful in its intensity that many have been led to suicide. It should always be distinguished from the ordinary

forms, since the latter are amenable to simple measures and do not require the drastic procedures which alone can relieve the agony of tic douloureux.

The etiology of trigeminal neuralgia is obscure, and considerable divergence of opinion is expressed by leading workers. It usually appears in persons of good health, more frequently past the age of forty, and generally without any definite initial stimulus. Marked arteriosclerosis seems to have a causal relationship, although a few cases appear in young patients who have normal arteries. As a rule, no neurotic history is obtainable. In the majority of the cases seen personally, carious teeth, or even sound teeth have been considered responsible by the patients and nearly all have had the teeth removed from the side affected, but without permanent relief. Occasionally the pain ceased for a few weeks or months, but returned in greater severity and more frequent attacks. The sacrifice of sound teeth in cases of tic douloureux is entirely unjustifiable.

The results of the pathologic examination of excised gasserian ganglia and the peripheral branches have been disappointing. No lesion has proven constant, for, while very definite pathologic conditions have been found in cases of trifacial neuralgia, exactly similar findings have been shown in ganglia which have never caused trouble. The prevailing opinion at present seems to favor an ascending neuritis, of unknown etiology, beginning in the peripheral branches and finally involving the ganglion. This theory may explain the temporary relief some patients get after the extraction of a large number of teeth, the branch to this part being injured in some way, the return of pain being coexistent with the return of function in the nerve or the ascension to a higher

and uninjured level of the pathologic process. The fact that tic douloureux may be the only manifestation of a tumor of the gasserian ganglion should never be lost sight of.

Of the three divisions of the trigeminal nerve, the third or inferior maxillary branch is usually the first affected, the process often originating in the inferior dental, spreading slowly to the lingual and other branches of this division and perhaps not appearing in the second and third divisions for months or years after. In fact the first or ophthalmic branch is often spared. In one of our cases this division was the first involved.

The systemic effects of trigeminal neuralgia are marked. Many patients are seriously undernourished, and nearly all show some emaciation due to the inability to take food. They are frequently worn out mentally and in long standing cases are nervous wrecks from loss of sleep and the almost constant pain. Morphine habit is very common and in fact can almost be prognosticated, since these patients finally give out completely and being unable to bear the pain longer, seek amelioration in morphine as their only relief except suicide. One author points out that the mortality from suicide in these cases more than equals the deaths from the severest operative procedures for their relief. If for no other reason than the prevention of the morphine habit with its serious sequelae, patients suffering from tic douloureux should be referred to the surgeon early in the course of the disease, since in surgical operations alone can a cure be expected.

The pain of tic douloureux is usually paroxysmal in character, intermittent or periodic, and is confined to the distribution of the branches involved. The pain is intense, often of a burning nature, with lightning like onset, darts upward and backward along the course of the nerve, and may last scarcely a second. The intervals between paroxysms varies between the widest limits; frequently the sharp, shooting pain is followed in less than a minute by another, and then another, and this terrible agony may last for several hours, following which the patient may have relief for a few hours to many days. One of our patients had the pain quite regularly every three minutes. The paroxysms are often brought on by talking, laughing, eating, or the slightest irritation to the affected side of the face. Some patients are unable to shave on the sensitive side, as a paroxysm is certain to be induced. Exposure to cold or even a slight draught striking the face may bring

on an attack. The first of our cases in this series would have a paroxysm when anyone entered the room where he was working. Spasm of the face on the affected side is not uncommon. One-half of the tongue may be involved, making eating and talking extremely painful.

Surgical treatment is alone to be considered in typical tic douloureux. The use of opiates should be condemned and other therapeutic measures are of no avail. The methods at our disposal are: 1. Alcoholic or osmic acid injections at the foramina of exit of the various branches on the face or in the course of the nerve, as within the mouth when the third branch is affected. 2. Neurectomy, preferably by the Thiersch method, either at the external foramina or along the course of the nerve. 3. Alcoholic injection at the cranial foramina of exit of the two lower divisions. 4. Neurectomy by exposure of the superior or inferior maxillary nerves at their exit through the foramina rotundum and ovale respectively as by Kocher's or Krönlein's methods. 5. Alcoholic injection of the gasserian ganglion through the foramen ovale. 6. Division of the two lower branches intracranially with interspersions of rubber tissue or a bone peg as in the Abbe operation. 7. Division of the ganglion and removal of the lower half together with the intracranial portion of the second and third branches as described by Hutchinson. 8. Removal of the gasserian ganglion by the Hartley-Krause, Lexer-Cushing, or Horsley operations. 9. Division or avulsion of the sensory root of the gasserian ganglion by the Spiller-Frazier or Kocher methods.

1. Alcoholic injections into the nerves at the mental and infraorbital foramina or along their course frequently give temporary relief; sometimes cessation of pain will last for four to six months. It is unusual to have it last longer. The disadvantages which this method possesses are: first, the relief when obtained is only temporary; second, subsequent injections do not as a rule give much relief, frequently none at all, or at most for only a very short time, thus necessitating the employment of some other procedure; third, the process may have extended beyond the area reached by the injection and no relief will be experienced.

2. Neurectomy is open to the same objections as peripheral alcoholic injections. The relief obtained is often of greater duration than after alcoholic injections, but rarely lasts more than a year. It is almost useless to repeat the operation when pain has once returned.

3. Alcoholic injections at the exit of the nerves from the cranium is quite satisfactory as a temporary measure. Permanent relief is scarcely ever obtained. The technic is not in itself difficult, but owing to the variation in skulls the nerve is not always to be reached and so a very short or no relief may follow the injection. Only the lower branches of the fifth can be reached by this method. The injection is usually quite painful.

4. Neurectomy of the superior and inferior maxillary nerves, the ophthalmic branch cannot be reached, at the foramina rotundum and ovale is difficult, rarely gives more than a year's relief, and in the case of the inferior division the motor root is practically always destroyed.

Alcoholic injection of the gasserian ganglion is strongly advocated by a few writers. It gives excellent results when the technic is carefully followed out and the alcohol actually enters the ganglion. Unfortunately it does not do this in many cases and simply makes an intracranial operation more difficult because of adhesions. Due to the great variation in the location of the foramen of ovale, it is often impossible to locate the opening and insert the needle. Many ingenious methods have been devised to locate the foramen, but none are infallible. Location by X-ray has recently been suggested. Even though the insertion of the needle through the foramen be simple, the difficulty of determining whether it has passed on through the ganglion or whether any other structures have been injured is so serious as to deter any but the most radical. In three of our cases the internal carotid lay exposed on the floor of the middle fossa, just posterior and external to the ganglion, without any bony covering. An injection of alcohol into the cerebral cortex, the middle meningeal artery or the internal carotid artery is not to be recommended.

6. The intracranial division of the superior and inferior maxillary branches according to the method of Abbe deserves attention, and when, owing to the condition of the patient, the least possible time should be consumed, the operation is indicated. The superior division cannot of course be reached with safety. In patients in whom the upper division is involved, the operation is therefore useless. In case it becomes subsequently involved either removal of the ganglion or section of the sensory root would have to be performed later. Unfortunately the relief expected is not always obtained, probably because of a pathologic condition in

the gasserian itself. Occasionally also the rubber tissue becomes displaced or the nerves find their way around it and the pain returns, necessitating another operation. The motor root of the fifth is practically always destroyed.

7. Hutchinson's division of the glans and removal of the lower portion together with part of the lower two divisions has given excellent results, but at least in my hands is as difficult as section of the posterior root. The motor root is always destroyed and where the superior branch is not affected at time of operation, the possibility of later trouble is always present. With involvement of this branch the operation is useless. The arteries supplying the gasserian enter it from beneath and sometimes troublesome bleeding results during its partial or entire removal. The principal advantage of this operation, which it also shares with the Abbe, is the absence of anesthesia in the eye.

8. Total extirpation of the gasserian ganglion by any one of the approved methods guarantees absolute relief from pain. Its disadvantages are, troublesome bleeding, danger of injury to the cavernous sinus, third, fourth and sixth nerves, destruction of the motor nerve, and time consumed as compared to simple section of the sensory root.

9. Division of the sensory root between the gasserian ganglion and the pons offers the following advantages over all other methods of treatment: first, less hemorrhage as the troublesome bleeding from the vessels which enter the under side of the ganglion is eliminated; second, the third, fourth and sixth nerves and the cavernous sinus are much less liable to injury; third, it is possible in some cases to isolate and preserve the motor root, thereby preventing paralysis of the muscles of mastication; fourth, the cornea seems less liable to ulceration, possibly because of trophic nerves passing from the ganglion to the eye. Division of the sensory root gives permanent relief from pain in all branches of the trigeminal nerve.

In brief, the operation consists of the exposure of the skull above the posterior half of the zygoma by a "question mark" incision, with reflection of the musculocutaneous flap. The skull is trephined, the opening enlarged to about three centimeters in diameter, the dura elevated by blunt dissection, and the middle meningeal artery isolated and divided. The inferior maxillary branch then appears at its exit through the foramen of ovale. The dura is separated from the ganglion in a medial and posterior direction and the sensory root exposed

as it passes over the petrous portion of the temporal bone to the pons. With a blunt hook the sensory root is elevated and separated if possible from the motor nerve. It is then divided and the wound closed in layers.

The mortality from operations on the gasserian ganglion is now about 3.7 per cent., a risk favorably comparable in every way with nearly every other major operation. Recurrence when the ganglion is actually removed in toto or where the sensory root is divided, is practically unknown. Such a recurrence indicates central origin of the pain.

The paralysis of the muscles of mastication on one side which follows division of the motor root is not very distressing and the patient soon forgets the deformity. The anesthesia of the face is such a grateful relief from the hypersensitiveness and pain that it is never complained of. The ocular symptoms are the most aggravating, but even when the most serious conditions develop, necessitating the enucleation of the eye, the patients state that they are more than willing to pay that price for the relief obtained.

In this Clinic the division of the sensory root is preferred to all other operations, for the reasons given before. It has been our experience that the extracranial operations and alcoholic injections are only palliative and that an intracranial operation must ultimately be performed. It therefore seems advisable to perform the radical operation in preference to the others, and as early as possible, before the patient's general health has been destroyed and before a drug habit has been formed.

The following cases have been operated upon the past year in the Surgical Clinic of the University Hospital. We wish to thank Dr. Camp of the Neurologic Department and Dr. Lyons of the Dental Department for referring some of these cases to us; to the above men and Drs. Parker and Prangen of the Ophthalmologic Department and Drs. Barlow and Furstenberg of the Otologic Department for examination and advice in the care and treatment of these cases.

CASE I. No. 5919. Mr. E. W., age 34. Mail clerk. Family and personal history negative. Present illness began five years ago with pains in right lower jaw, apparently located in the molar teeth. The pains came on two or three times a day and lasted one to three minutes. Two years later had alcoholic injection in the infraorbital and infradental branches of the fifth nerve. Pain was relieved for only a short time. Three months after the injections he was operated upon and the inferior maxillary branch avulsed at a point in the ramus of the jaw. No

further pain was experienced for seven months when he had a recurrence of his former shooting pains in the right upper and lower jaws radiating particularly along the zygoma to the ear. Accompanying this he has a facial spasm on the right side. The pain has increased in severity, the attacks in frequency and for the two weeks preceding admission his condition has become almost unbearable. The attacks now appear from one to three minutes apart. An attempt to eat, speak, or make any motion with the mouth brings on a paroxysm of pain and a spasm of the right side of the face. As soon as the pain returned after avulsion of the nerve, alcoholic injections were again made but without relief. The pains have now persisted for three months. Physical examination shows a somewhat emaciated individual with marked spasm of the right side of the face, coincident with the attacks of pain. The hand is clapped suddenly to the face and the head bent to the right during the paroxysms. These appear when any attempt to answer questions is made. Neurologic examination negative except for partial facial paralysis, the result of the previous operation, X-ray, negative. Wassermann negative.

March 5, 1917, operation by Dr. Peet under ether anesthesia. An intracranial operation was performed with section of the sensory root of the gasserian ganglion. No unusual difficulties were met. The motor root could not be distinguished and was cut with the sensory. Convalescence was rapid; complete anesthesia was present in the distribution of the right fifth nerve, and the patient was discharged cured nine days after operation.

Subsequent history. Patient has been entirely relieved of pain, but developed a slight keratitis which was treated successfully in the Ophthalmologic Department. He has gained rapidly in weight.

CASE II. No. 6155. Mrs. M. C., age 52. Housewife. Family history negative. Personal history negative except for five miscarriages each at five months and a choreiform attack consisting of jerking movements of the right arm and hand which lasted for three months and terminated at birth of her first child. Present illness began about four years ago with pain on right side of face which appeared while talking or eating. Pain is sharp and lancinating, comes on in paroxysms and radiates all over right side of face. Had alcoholic injection by Dr. Camp in 1915 with some relief. Was operated upon in the Surgical Clinic two years ago, at which time resection of the inferior dental nerve was performed with temporary relief. The pain has constantly increased in severity and now interferes seriously with sleep. All teeth were removed without alleviating the symptoms. Alcoholic injection one week ago gave no relief. Patient says for the past four years she has practically been unable to talk. Physical examination negative. Neurologic examination negative except eyes react somewhat sluggishly to light and there is a slight lateral nystagmus in both eyes on looking to right and left. Wassermann negative.

April 7, 1917, operated upon by Dr. Peet under ether anesthesia. The sensory root of the gasserian ganglion was divided on the right side. Motor root was uninjured. Complete anesthesia on right side of face with loss of pain. Subsequent history. On the seventh day patient developed a

partial paralysis of the sixth nerve. This was still present when patient was discharged cured, April 27, 1917.

CASE III. No. 6324. Mrs. M. B., housewife, age 41. Family history negative. Personal history. Patient has had hard headaches for years, but says the pain in the face is entirely distinct. Was operated upon at the Mayo Clinic seven years ago and a diagnosis of abdominal tuberculosis was then made. Apparently has recovered from this trouble. Appendix has been removed and the gall bladder drained. Present illness started suddenly three years ago with severe continuous pain on right side in region of lower molar teeth. Pain varied in intensity, being very severe at times, so that morphine was necessary, but the pain never ceased entirely. This lasted for a year when she had all the teeth, twenty-eight in number, removed at the same time, under chloroform narcosis. The pain was completely relieved for five months, when it returned in the same region and with even greater severity. In May, 1916, the inferior maxillary branch of the fifth nerve was avulsed through an incision at the angle of the jaw. This gave complete relief until December, 1916, when the pain gradually returned, appearing at intervals of one or two days. In March, 1917, the pain became practically continuous, one paroxysm following another in rapid succession. It was also much more severe and sleep could only be obtained by the use of large doses of morphine. She had an alcoholic injection last week but without relief. The pain now covers the entire cheek up to the level of the zygoma and down under the inferior maxilla to a point one inch from mid-line. Right side of the tongue is involved, but the nose, eye, and upper portion of the mouth are free. She still has the headache, most marked over the anterior vertex. Physical examination negative except for considerable emaciation. Blood pressure, systolic one hundred ten, diastolic seventy. Wassermann negative. Neurologic examination shows fine tremor of tongue which protrudes slightly to the right. Protrusion of tongue is very painful. Bilateral ankle clonus, no Babinsky. Patient is almost unable to eat or sleep.

April 7, 1917. Operated upon by Dr. Peet under ether anesthesia. Sensory and motor root of gasserian ganglion divided. The motor nerve could not be distinguished even after section of the root. Patient was immediately relieved of the excruciating pain and had complete anesthesia of the right side of face. Lagophthalmos and keratitis of the right eye developed immediately and were treated in the Ophthalmologic Department by Dr. Prangen. Patient discharged cured April 21, 1917, with keratitis much improved.

Subsequent history. Keratitis has returned at intervals. Patient is free from all pain and has gained fifty pounds in weight.

CASE IV. No. 6679. Mr. I. F., age 52. Farmer. Family and personal history negative. Present illness; about two years ago he noticed a sharp "cutting" pain which came on at times when he caught cold or otherwise irritated the right side of his face. The pain starts at the median line of the lower lip and radiates backward following the mandible up to the auricle. It is quite intense over the malar bone.

Soon after the attacks commenced all the teeth were extracted, but without relief. The pain was often brought on by talking, eating, or shaving the right side of face. It appears at irregular intervals, often, many times a day, and may waken him at night. The pain is often burning in character, especially a burning sensation in the upper lip. The paroxysms are of great severity and are described as sharp and shooting, as if a red hot knife was thrust upward through the face. No remedies give relief. Physical examination negative. Neurologic examination negative except for a hyperesthesia of the right side of the face beginning at the middle of the lower lip. This hyperesthesia has been worse than at present. The tongue protrudes to the left of the median line. X-ray examination shows the neural canal is normal and there is no evidence of pathology. The eye examination shows early arteriosclerotic changes and slight edema of the retina. Wassermann negative.

April 21, 1917. Operation by Dr. Peet under ether anesthesia. Inasmuch as the pain was confined to the lower two branches of the fifth nerve, only the lower two-thirds of the sensory root on the right side was divided, thus insuring some sensation in the eye. The motor root was isolated and was not divided. After operation complete anesthesia of the cheek, upper and lower lips existed. This anesthesia stopped sharply at the mid line of the lips. A herpes of the upper lip on the right side developed after the operation and lasted about five days. Eye examination by Dr. Parker on April 30th showed anesthesia of the outer half of the right eye. The patient was entirely free from pain and was discharged cured, April 30, 1917.

Subsequent history. On July 12, 1917, the patient returned to the Hospital complaining of a severe burning sensation on the right side of both upper and lower lips. The pain had not returned. He was examined by Dr. Camp who made the following report: "The examination shows a weakness of the right motor fifth, sensory disturbance in the distribution of the right fifth, including the first division which was formerly (i. e. immediately after operation) exempt. I would be of the opinion that following the operation the patient has developed an inflammatory change in what remains of the gasserian ganglion and that this is the cause of his present symptoms."

It seems peculiar that a burning sensation is felt on the right side of the lips and yet this area as well as the remainder of the face supplied by the superior and inferior maxillary divisions are absolutely anesthetic to pain, touch, or temperature. He was given aspirin and asked to return later for another examination.

August 19, 1917, patient returned to the Hospital complaining of a severe burning sensation on the right side of the upper and lower lips and adjacent side of the face. The anesthesia is complete as before. It was suggested that an inflammatory process had involved the central end of the sensory root or that it was caught in scar tissue. This explanation if it applied to cut ends of any of the branches distal to the ganglion would seem feasible. Such symptoms referable to injury of a sensory root proximal to a ganglion are unknown to me. Since the patient insisted that something be done another

operation was performed August 20th and the ganglion removed together with the larger part of the central end of the sensory root. Following this, complete anesthesia of the entire distribution of the fifth nerve was present, the burning sensation was completely relieved and the patient was discharged cured fifteen days after operation. In October the patient returned with a rather severe conjunctivitis in the right eye and slight burning on the right near the middle of the upper lip.

A satisfactory explanation for the burning sensation in the lips after section of the sensory root, and again after removal of the ganglion, is difficult to make. Probably it is of central origin, but if so, its temporary relief after the first operation and complete relief after the second, except for the slight return in the upper lip needs elucidation. The shock to the central nervous system from the intracranial operations may explain this.

CASE V. No. 7055. Mrs. J. F., age 68. Housewife. Family and personal history negative. Present illness began seven years ago with "jerking" pain over the right side of the upper lip which radiated backward to the auricle and downward to the margin of the jaw. Pain at first appeared at monthly intervals, then became more frequent until at present it is almost continuous. History of previous treatments is indefinite. Physical examination shows a very much emaciated, feeble, old lady, in terrible pain. No pathologic conditions evident by palpation or auscultation. All teeth have been removed. Neurologic examination negative. Wassermann negative.

June 2, 1917, operation by Dr. Peet under gas anesthesia, because of her very feeble condition. The sensory root of the gasserian was divided. The motor root could not be distinguished and was necessarily cut. Patient was discharged cured, with complete anesthesia of right side of face and no pain, six days after operation.

Subsequent history. The patient rubbed the cornea of right eye rather vigorously and developed a conjunctivitis which cleared rapidly and without leaving any ill effects.

CASE VI. Mr. J. P., age 65. Watchman. Family history negative. Personal history negative except for hay fever for the past twelve years, which usually appeared the middle of August. Present illness started six years ago with sharp pain in the right cheek which lasted about thirty minutes. The attacks have returned frequently, coming on at shorter intervals until at present the pain is almost constant. He describes it as dull and aching in character with sharp shooting pain of great severity, coming on every half hour and lasting about three minutes. The attacks are growing more severe in character. Pain is confined to the lower two branches of the fifth, the ophthalmic never being affected, although the right eye is tightly closed during an attack. Neurologic and physical examination negative. Wassermann negative.

June 16, 1917, operation by Dr. Peet under ether anesthesia. Since the pain was confined to the supra-maxillary and infra-maxillary divisions, only the lower two-thirds of the sensory root was divided. The motor root was not injured. The patient was discharged cured, six days after operation. Complete anesthesia of the lower two branches with nor-

mal sensation in the conjunctiva and forehead was present. Pain was completely relieved.

Subsequent history. No complications have arisen. Pain has not returned.

CASE VII. No. 7132. Mrs. E. H., age 46. Housewife. Family history negative. Personal history negative except for a "nervous" attack fourteen years ago which confined her to bed for two weeks. Present illness began four years ago with pains on the left side of the nose and cheek. The attacks came on every spring and lasted all summer. Recently the lower jaw on the left has also been affected. All teeth were removed ten years ago. She has had numerous alcoholic injections without relief but has not used morphine. Neurologic examination by Dr. Camp was negative. Wassermann negative. X-ray showed chronic sinusitis of left maxillary antrum and ethmoids. Examined by Dr. Canfield who did not recommend treatment for the otologic condition.

June 27, 1917, operated upon by Dr. Peet under ether anesthesia and the sensory root of the gasserian divided. The motor root was isolated and was not injured. The patient was discharged cured, seven days after operation. Pain was absent and complete anesthesia of the left side of the face was present.

Subsequent history. The patient went without protection to the left eye and developed a keratitis for which she returned to the Ophthalmologic Department. The pain has not returned.

CASE VIII. No. 8300. Mrs. M. R., age 57. Housewife. Family and personal history negative. Present illness began thirty-five years ago, at the age of 22 with sharp shooting pains in the left side of face. These pains have appeared at varying intervals and for periods as long as two years have been very frequent. For several years the pain had been present every day and finally became almost constant, so three years ago the inferior maxillary nerve was avulsed external to the foramen ovale through the Kocher incision. This gave complete relief for one year, when the symptoms returned with even greater severity. All the teeth were removed several years ago without relief and alcohol injections have not stopped the pains. All branches of the fifth nerve are now involved, the lower two being the most seriously affected. The pain is practically constant and has required the continued use of morphine. This drug now gives only slight relief as considerable tolerance has been acquired.

Physical examination shows considerable emaciation. Neurologic examination is negative except for complete paralysis of the motor nerve of the fifth on the left side, the result of the previous operation. No anesthesia from the previous operation.

September 10, 1917, operated upon by Dr. Peet under ether anesthesia. The sensory and motor roots of the gasserian ganglion were divided on the left side. The motor root could not be easily distinguished from the sensory, and inasmuch as motor paralysis of three years duration was present, no serious attempt was made to preserve it. After operation, complete anesthesia of the area supplied by the left fifth nerve was present. Pain was entirely relieved. The patient was discharged cured, ten days after operation.

Subsequent history. The patient was warned to protect the left eye, but went about without protection of any kind. A severe conjunctivitis developed which was untreated, and later a corneal ulcer appeared, when she returned to the Hospital and has been treated in the Ophthalmologic Department.

CASE IX. No. 9009. Mr. T. W. Farmer. Age 78. Family and personal history negative. Present illness began five years ago during the winter. He had sharp shooting pains in the region of the right eyebrow which appeared at frequent intervals for one year. The pain then spread to the right side of the nose and gradually increased in severity. One year later the pain included the entire area of distribution of the upper two branches of the fifth nerve on the right side. The paroxysms have increased steadily, both in number and intensity. At the present time they are almost continuous. Attacks are brought on by the slightest touch to right side of face. Eating does not bring on a paroxysm unless the face is accidentally touched. Talking seems to initiate an attack at times. Most of the paroxysms occur spontaneously. The right side of the face is very sensitive. He says he has not lost weight, but has been unable to sleep for more than an hour or two at a time. Physical examination. Low, blowing, systolic murmur heard over precordial area and transmitted to axilla. General condition good, considering his age. Blood pressure, systolic 100, diastolic 70. Wassermann negative. Neurologic examination negative. Patient was transferred almost immediately from the Neurologic Clinic because of the excruciating pain he was suffering.

November 3, 1917, operated upon by Dr. Peet under ether anesthesia. Sensory root of the gasserian ganglion was divided without injury to the motor root. The patient left the operating table in good condition. Six hours later the patient was hungry and ate a light supper. Examination on the third day after the operation showed complete anesthesia of the right side of the face with no motor paralysis. He was in excellent condition, entirely free from pain, and was ordered up in wheel chair the next day. However, during the night he got out of bed and fell to the floor, striking the head. When found he was in deep coma which lasted for twenty minutes. Following this he slightly recovered, talked in an irrational manner, but could not be aroused to answer questions. He never regained consciousness and the following day was in coma again, remaining so until death on the sixth day after operation. Autopsy showed extensive signs of concussion. Hemorrhages were found on both sides of the cerebral cortex, at the base on both sides, within the occipital lobe on the right, and deep in the cerebellum on the left. These last were of the multiple pin point type. This cannot be considered as an operative death. The history given by relatives showed that the patient was in the habit of getting out of bed at night and had fallen several times before.

Discussion. The eye changes which occurred in our patients were all due with one possible exception to carelessness on the part of the patients themselves. All patients after operations for tic douloureux are warned to protect the eyes by wearing a pair of automobile goggles,

a Buller shield, or similar device. The eye is usually covered by a Buller shield immediately after operation to protect the cornea from dust or other foreign bodies and to prevent evaporation and drying of the conjunctiva. The eye is washed daily or oftener with boric solution and the patients are requested to do the same on their return home. They are also instructed to go to a competent ophthalmologist as soon as any redness is seen in the eye, and to notice **any changes in the conjunctiva** since the subjective symptoms will be absent due to the anesthesia. However, several of our patients, feeling so well, and being entirely relieved of pain, have not taken the necessary precautions to protect their eyes and have developed more or less serious complications.

Only one patient developed lagophthalmos. This was undoubtedly due to pressure or stretching of the branch of the facial nerve which supplies the orbicularis palpebrarum, by the retractor. The position of the "question mark" incision precludes any possibility of division of the upper branches of the facial nerve. A paralysis such as this patient had would probably be only temporary but considerable damage could result to the eye in the mean time, since the cornea would not be frequently washed off by closing of the eyelids.

Paralysis of the motor root of the fifth nerve was present in one of our cases, the result of a Kocher operation on the inferior maxillary nerve. Since paralysis already existed, a serious attempt to separate the motor root from the sensory was not made. Excluding this case, the motor root was isolated and not divided in five of the eight sections of the sensory root, or with the case included, a ratio of five uninjured to four divided. Division of the motor root in the Spiller-Frazier operation does not necessarily mean permanent paralysis of masticatory muscles, since several examples of regeneration of this nerve have been reported. No such regeneration is possible when the entire ganglion is removed. The patients however complain very little of this paralysis. An interesting auditory condition was discovered after the intracranial operation. This consisted in a transitory bone conduction deafness of slight degree. The whispered word was heard normally.

It is evident from a perusal of the histories of the cases in this series that peripheral operations are only palliative. Temporary relief, sometimes lasted for a few weeks only, in a few cases relief was experienced for several months, but in every case the paroxysms re-

turned, and generally in greater frequency and severity. Alcoholic injections gave the shortest relief and seldom were of benefit when repeated. Avulsions of the nerve naturally were superior to the injections, but were never permanent in their results. The facial nerve had been injured during the avulsion of the inferior maxillary branch in the ramus of the jaw in two cases seen. This could not happen in the operation for section of the sensory root as practiced here.

Conclusions.—Tic douloureux or trigeminal neuralgia must be sharply distinguished from the ordinary forms, since the latter are amenable to simple measures and do not require the drastic procedures which are necessary for permanent relief in the major form.

The pathology of trigeminal neuralgia is obscure. The prevailing opinion at present is of an ascending neuritis of unknown etiology which finally invades the gasserian ganglion. The removal of sound teeth in the hopes of relieving the attacks of pain is absolutely unjustifiable.

Surgical treatment should alone be considered in typical tic douloureux. Nine methods are available, but from the history of the cases in this series, as well as from the experience of other surgeons it is evident that all extracranial operations are only palliative and simply postpone the inevitable intracranial procedure.

The choice then lies between section of the branches distal to the ganglion, only applicable in the lower two divisions), removal of lower part of ganglion, excision of ganglion in toto, and section of the sensory root. The latter is undoubtedly the preferable method, as it is performed with the minimum of complications and permanent relief from pain can be absolutely assured.

Ten intracranial operations were performed in this series. In nine cases the sensory root of the gasserian ganglion was divided, and in one the ganglion was removed in toto. All have had complete relief with no return of the paroxysms.

BIBLIOGRAPHY.

1. Woolsey, George. Surgery of the Nerves. Keen's Surgery, Vol. II.
2. Frazier, C. H. Intracranial Surgery of the Fifth (Trigeminal) and the eighth (Auditory) nerves. Keen's Surgery, Vol. V.
3. University of Pennsylvania Medical Bulletin, April, 1909.
4. Taylor, A. S. Operation of Cranial Nerves, Johnson's Operative Therapeutics, Vol. I.
5. Trifacial Neuralgia; Section of Posterior Root of the Fifth Nerve Proximal to the Ganglion Cure, Ann. Surgery, 1912, IV, 905-7.
6. Cushing, H. Remarks on Some Further Modifications in the Gasserian Ganglion, Operation for Trigeminal Neuralgia (Sensory Root Evulsion), Tr. South. Surg. and Gynec. Assn., 1906.
7. Remarks on the Surgical Treatment of Facial Paralysis and of Trigeminal Neuralgia, Tr. Am. Surg. Assn., 1907.

8. Abbe, Robert. Surgery of the Fifth Cranial Nerve for Tic Douloureux. Jour. Am. Med. Assn., May 5, 1900.
9. Spiller, W. G. Pathology of the Chief Surgical Disorders of the Nervous System and its Importance in Clinical Diagnosis. Keen's Surgery, Vol. II.
10. Krause, F. Extirpation of Gasserian Ganglion. Surgery of the Brain, Vol. III.
11. Rawling, L. B. Trigeminal Neuralgia. Surgery of the Skull and Brain.

DISCUSSION.

DR. CARL D. CAMP: I think that perhaps in discussing the subject of the treatment of trifacial neuralgia we should remember a point which we are very likely to forget, and that is that neuralgia of the face or elsewhere is probably only a symptom. It is true that a certain number of older writers have made a distinction between tic douloureux and trifacial neuralgia and they have considered that tic douloureux is a disease and trifacial neuralgia is a symptom. I am unable to make a differential diagnosis between the two. I believe that in every case the diagnosis of neuralgia is as unsatisfactory as the diagnosis of headache or indigestion. Therefore the first step in the treatment should be the consideration of what is really wrong with the patient. Of course, in these patients the pain is frequently so severe that one hates to spend the time which may be wasted in putting them through a long series of tests to find out what is the real trouble.

Dr. Peet has said that the alcoholic injection of the peripheral nerve is very often satisfactory, temporarily. I believe that it is a good thing to try at first in every case, especially if only one branch is affected. It is such a simple operation and it produces complete and immediate relief. If it only lasts for a few months there is that much gained at any rate. I have seen cases where to the best of my knowledge and belief a superficial injection has resulted in permanent relief. Dr. Peet spoke of the injection of alcohol into the gasserian ganglion. I gathered that he was possibly a little incredulous. As some of you know, I have done it myself on the living subject. While it is not extremely easy, still it is comparatively easy.

It is done without anesthetic of any kind. The needle is inserted beneath the zygoma and just as near to the depression of the coronoid notch as you can get it. Then, if you have calculated your direction right, it passes directly back into the foramen ovale. In the literature on the subject there is a considerable number of papers by men who have injected only the second and third divisions of the fifth nerve and believed that they had injected the ganglion. At least they have obtained only an analgesia of the cheek. In my own cases I was able to get a total anesthesia of the supraorbital branch and I therefore feel perfectly sure that the needle was in the gasserian ganglion. I gave it up after three cases, not because of unfavorable results, because the patients are still relieved, but thinking the matter over, I came to the conclusion that it was only a question of time until I should kill somebody that way and so I decided to leave the job to the surgeon. It is not difficult but the surrounding structures in the neighborhood of the foramen ovale and just inside are rather important and I believe that the open operation, either gasserectomy or section of the sensory root, is the safer in most cases and this in spite of the statistics to the contrary. I would advise the operation of injection of the ganglion provided there

was some serious surgical objection to the open operation. If the patient was a nephritic or cardiac case who could not take an anesthetic, or for some reason would not have an open operation, and preferred to take the risk of a gasserian injection, I think it would be allowable. Since publishing my injection paper I received a number of letters from patients who wanted to have their ganglia injected, but my replies seemed to dampen their ardor.

DR. AVERY D. PRANGEN: We have been very much interested in Dr. Peet's series of cases, not only from the ophthalmologic standpoint, but also neurologically. The manifestations of complications in the eye may be divided into three general heads, a lagophthalmos or inability to close the eye, ptosis or inability to open the eye, and corneal pathology. Lagophthalmos, although potentially a serious affair, in this series of cases is only transient and of very little importance. It seems to come on within a very short time after the operation, either the same day or within a day or two. The explanation seems to be rather difficult. The first and more probable possibility is that of pressure from hemorrhage, causing a blocking and temporary paralysis. Inasmuch as the exit of the seventh nerve is in rather close proximity to the field of operation, and also close to the gasserian ganglion, trauma at the time of operation either to the nerve itself in the skull or the branch going to the orbicularis on the face might explain the result, although you would expect a permanent paralysis of the muscle. Indirectly it might occur through the various connections of the facial and the fifth nerve, for instance, through the greater petrosal nerve or some of the more peripheral connections. In the treatment of the lagophthalmos we have put on a Buller's shield and kept the eye clean.

The ptosis is probably of the same general nature as the lagophthalmos.

The corneal pathology is much more serious, inasmuch as it involves the vision of the eye on the side of the operation. It has manifested itself either as a keratitis, an indolent neuroparalytic ulcer or a very virulent infected ulcer. The corneal pathology occurs about the second or third day or may be delayed a week or more. It gives a definite clinical picture. The cornea becomes hazy in the center, the epithelium is stippled and there develops an ulcer in the center. As to the etiology, from our standpoint, it is a very interesting problem. Section of the fifth nerve seems to bring on a trophic nutritional disturbance in the cornea, particularly in the epithelium. The latter seems to lose its normal resistance so that it is more subject to dessication and trauma. Experiments in animals after section of the nerve have brought on keratitis with ulceration. It has been argued that this pathology results from the insensitive cornea being exposed with resulting trauma and infection. However, the condition has developed where the cornea has been protected. So there is probably a trophic nutritional disturbance as the primary cause. Secondarily, there is a decrease in the lachrymal secretion. The epithelium becomes pitted and shows a rapid tendency to slough. So it would seem that the cornea needs

more moisture and due to the decrease in the lachrymal secretion it receives not even a normal amount. As another contributory cause we have the insensitive cornea which has lost its normal protective mechanism by stimuli from the lids, conjunctivae and the cornea itself.

The treatment of these cases would seem to divide itself into prophylactic and local. Another common procedure in the course of an operation is to test the corneal reflex as a judge of the depth of anesthesia. The repeated testing of a cornea which is insensitive is bad practice. Second, put on a Buller's shield when the patient leaves the operating room. Then instruct the patient that his cornea must be protected by the senses of sight and hearing. Also have the patient wear protecting lenses to avoid foreign bodies and trauma. When the patient leaves the hospital instruct him to report for treatment upon the appearance of any redness in the eye. When the patient goes to bed at night, put a pad over the eye until he gets up in the morning. These measures would help to avoid the initial trauma. Locally, treat as a corneal ulcer with a pad, atropine and stimulating applications. As to the prognosis, these eye complications are bad as far as acute central vision is concerned, because they always leave a dense central opacity in the cornea. As far as saving the globe and peripheral vision is concerned, the prognosis is good.

DR. ALBERT C. FURSTENBERG: These cases have been interesting to us from the standpoint of differential diagnosis and the functional effects upon the ear. Two cases which had been sent to the Hospital for trifacial neuralgia were referred to our department and found to be suffering from chronic maxillary sinusitis. Both cases were operated upon with complete and permanent relief of the pain.

Following operation the patients have shown very little deafness for ordinary conversational voice but a decrease in the bone conduction and a lowering of the high limit when tested with the tuning forks. These changes are characteristic of slight nerve deafness and are probably the result of traumatism to the eighth nerve during operation. In the cases examined, in from a month to six weeks following the operation the function of the eighth nerve has been almost completely restored to normal.

DR. MAX PEET: First I wish to explain to Dr. Camp that I am not skeptical as to his ability to inject the gasserian ganglion. I do not, however, consider it a safe procedure. All of our cases were warned about the eye and some of them were told before operation that there was a possibility that they might have trouble with the eye which might mean enucleation. The patients all said they would rather lose the eye than have the pain. Two or three were extremely insistent upon operation immediately. They were in poor condition but they said that if they were willing to take the chance, we should be. They suffered so severely that the paralysis of the masticatory muscles and trouble with the eye are completely outweighed by the relief from pain.

GASTRIC DISTURBANCES AS A PART OF CENTRAL NERVOUS SYSTEM SYPHILIS.

L. HARRY NEWBURGH, M.D.

(From the Medical Clinic, University Hospital, Ann Arbor, Michigan).

I want to report the histories of two cases of gastrointestinal disease occurring as a part of cerebrospinal syphilis. My object in bringing these cases before you is to emphasize certain outstanding features of this condition, features which are described in the literature, but which are liable to be overlooked by the practitioner. These features are:

First, severe gastrointestinal disturbances in cerebrospinal lues are frequent.

Second, gastrointestinal disturbances may form the chief complaint in this disease.

Third, symptoms suggesting cerebrospinal syphilis may be vague or entirely absent.

Fourth, the gastric disturbances may occur so early in cerebrospinal lues that none of the older signs of the latter disease may as yet be present and the correct diagnosis may depend entirely upon the examination of the cerebrospinal fluid.

The first case is a man of 29 who came here on the 5th of November complaining of abdominal pain somewhat more marked in the upper abdomen. The family history is of no consequence. There is a record of two living children. His wife had no miscarriages. He had gonorrhea at 18 accompanied by soft chancres. These were not followed by secondary signs of lues. He had another attack of gonorrhea in May, 1917, which has since disappeared. He had an abscess on the tibia eleven years ago which took a very long time to heal.

The present illness began in March, 1912, and came on suddenly with very severe sharp pain in the left upper quadrant of the abdomen beneath the ribs. This pain was relieved by vomiting, but shortly returned. He had an operation for gallstones and later a second operation for appendicitis. Three months after the second operation he returned to work but worked only three weeks when the pains returned. This time vomiting did not relieve him, in fact, he became worse. He was given morphia by his doctor. He had a third operation for adhesions followed by only temporary relief. He had a fourth operation in October, 1914, when a gastroenterostomy was performed. He was advised to have a fifth operation. In some of these attacks he has vomited bright red, sometimes dark blood. He has also had

numerous hemorrhages from the bowel. His attacks are quite irregular. His last one started the 26th of September and he came here the 5th of November. The pain usually comes on a few minutes after meals. It is severe, cutting, gnawing, and is sometimes relieved by vomiting and sometimes not.

In his physical examination the things of consequence are an old scar on the left tibia. The pupils are slightly irregular, one pupil being larger than the other. They both react to light and to accommodation. The extraocular movements are normal. The rest of the examination is negative except for a palpable spleen. His abdomen is soft; there is no tenderness, no rigidity, and no masses. There is slight enlargement of the inguinal glands. The biceps and triceps reflexes are diminished but present. The patellar and Achilles jerks are obtained with reinforcement.

So the physical examination shows this irregularity of the pupils and sluggish knee jerks. There is no Romberg and there are no sensory disturbances. The X-ray report favors an appendicitis, but no diagnosis is made. The cerebrospinal fluid showed fifty cells with albumin and globulin present. The Wassermann on the blood is negative. On the cerebrospinal fluid it is markedly positive. He was treated by intraspinal salvarsan. As a result of that his gastrointestinal symptoms have entirely disappeared. He gained about forty pounds, returned to his work and has felt entirely well, although his gastric disturbances started over four years ago and he has had four abdominal operations.

The second case is a woman of 39 who came here on the 6th of November complaining of stomach trouble. There is nothing of importance in her family history. Her first husband was apparently a syphilitic. She married again. The second husband is living and well. In the winter of 1914 the patient began to lose strength and about ten pounds in weight. Her appetite was poor and she was constipated. In October, 1915, she was seized by a gnawing steady pain in the left upper quadrant which was relieved by eating and taking soda. The pain would return two or three hours after a meal. After three or four weeks she felt entirely well except for slight irregular pain. She continued this way until October, 1916, when she had another severe attack lasting five or six weeks accompanied by nausea and vomiting. October, 1917, she had another attack. In her final attack just before entrance the condition was more severe and she had very severe hem-

orrhages. This history, of course, suggests peptic ulcer.

Examination shows both pupils reacting to light and to accommodation. The left pupil is distinctly irregular. There is no cervical glandular enlargement. The abdomen is level. The liver and spleen are not felt. There is moderate tenderness over the epigastrium and right upper quadrant. The biceps and triceps and patellar and Achilles jerks are normal. There is no Romberg sign.

So the only thing suggesting lues is the irregularity of the left pupil. The Wassermann on the cerebrospinal fluid is + + + +. One specimen of blood was ++, another + —. She was transferred to the Department of Dermatology and has had intraspinal treatment. For the last two weeks she has had no gastrointestinal disturbance.

In addition to these two cases we have had three others in this Clinic since the first of October. All of these people came here because of the gastric disturbance. In none of them had the correct diagnosis been made prior to the entrance into the Hospital, this in spite of the fact that two of the cases were actually advanced tabetics.

DISCUSSION.

DR. JOSEPH A. ELLIOTT: We have seen in the last year or two many cases of tabes with gastric crises. Some of these have responded very readily to treatment, while others have been rather refractory. Undoubtedly gastric crisis is the most common gastric disturbance associated with tabes. There have been other gastropathies described, such as perforating ulcers, active gummatous lesions and symptoms referable to gastroparesis and enteroptosis. The perforating ulcers are similar to the ones occasionally seen on the feet of tabetics. Bloody vomitus or hemorrhage suggests the presence of such lesions. There is every reason to believe that active gummatous lesions may be found in tabetics as gummata of the skin are sometimes seen in tabetics.

In recent years syphilis of the stomach has attracted the attention of clinicians, who have recognized three distinct forms, viz; the isolated ulcer, multiple ulcers, and a diffuse fibrosis. The symptoms from these lesions are the same as with the peptic ulcer, with the exception that the pain is not relieved by the administration of alkalis. Another point which has been laid stress on by some observers is the low acidity found in syphilis as compared with a very high acidity in peptic ulcer. In Eustermann's twenty-three cases he found an average acidity of 26, and in a few cases found an anacidity. The more advanced gummatous lesions of the stomach resemble very closely malignancy. The loss of weight, however, which is rather marked is not followed by the great loss in strength which occurs in malignancy. All of these cases, however, respond very nicely to specific treatment. After the lesion has entirely disappeared it is sometimes necessary

to have the patient operated upon for the resulting constrictions.

Outside the gummatous lesions and the ones previously described there are relatively few syphilides of the stomach. Secondary lesions have been described by Virchow who claims that these lesions occur at the time of the general dissemination of the spirochetes into the blood stream. It is generally conceded at present that the disease gains entrance into the nervous system at that time, so it is reasonable to believe that the different viscera may be likewise affected. Syphilis of the stomach is perhaps more common than we are led to believe and it will take further study and observations to confirm this point.

DR. MARK MARSHALL: It is very interesting, of course, to know whether or not there was some local lesion in the cases reported by Dr. Newburgh, something in addition to a central nervous lesion with a secondary manifestation upon the part of the stomach. This problem is met with in every case. I have in mind two private patients who happened to come to me at the same time a few years ago. Both were diagnosed chronic appendicitis and operated upon by the same surgeon. Each had complained of stomach symptoms regarded as due to a chronic appendix. Neither of them improved and it was found in one case that the Wassermann was + + + + and the pupils irregular and the man went on to an advanced stage of general paresis and finally died. His stomach findings were compatible with the symptoms which he showed. The stomach was enlarged and dilated and he had a low degree of stasis and occasional vomiting. Strange to say, however, his stomach symptoms improved remarkably with salvarsan, mercury and potassium iodide. In the other case the stomach findings were of no consequence. The laboratory findings were not strongly positive for syphilis but all of his signs and symptoms, and particularly his mental state was characteristic of an early general paralysis and he had to be committed on account of his mental changes. He was not improved by antisyphilitic treatment.

There is an interesting case which we had in the Medical Clinic. This was a patient with stomach symptoms in which cancer was suspected and I believe the patient was explored. Afterwards, she was found to have syphilis and was treated thoroughly and improved, but came back some months later with an inoperable carcinoma. The mere fact that the patient improves under antisyphilitic treatment does not necessarily prove that the gastric condition was gastric syphilis.

DR. HAROLD DEB. BARSS: The question which occurs to me is this: If the symptoms exhibited by these two patients are frankly and only due to central nervous system lues, I think we shall have to revise our mental picture of gastric crises. These attacks are typical of definite lesions in the gastrointestinal tract that surgeons are accustomed to treat without evidence of luetic infection. If these are symptoms of central nervous system lues apart from local conditions, then the surgeon will have to revise his mental picture and make more careful routine examination of all his cases to rule out neurologic findings. One interesting question is whether central nervous system lues without a local lesion will give the ordinary X-ray picture which

we find in local lesions. I would like to ask Dr. Van Zwaluwenburg whether central nervous system lues without local lesions gives a typical picture.

DR. QUINTER O. GILBERT: Since these cases were brought up chiefly because of the problems of diagnosis, there is one point in diagnosing early tabes to which I wish to call attention because so often the test is not correctly done. The point in question is the light reflex for the eye. Many people confuse the consensual and direct light reflex and do not obtain the loss of light reflex, because the patient had not fixed for accommodation. One should test always for both the consensual and direct reflexes, because in a large number of patients the consensual reflex is lost before the direct. Again this will act as a check on the direct. I have seen the "fixed pupil" called normal, because the accommodation reflex was so great, when the patient had not properly fixed for distance. The pocket flash light which is commonly used now for testing the eyes, may lead to the confusion above mentioned. Invariably if the light is held in the field of vision and flashed, the patient accommodates for the near object. The proper way to use the light is to have the patient fix on a distant object and then play a beam of light into the pupil without making any other manoeuvre which will attract the attention, thus calling into play the accommodation for distance.

DR. JAMES G. VAN ZWALUWENBURG: I am interested in this subject and have usually met with chagrin. It is impossible here to cover the whole subject of gastrointestinal syphilis which Dr. Elliott has well considered. The gummatous and scar tissue lesions and the contractures following the gumma, are usually mistaken for carcinoma radiographically and most of them have not been recognized before operation. Several of them have been closed as being inoperable carcinomata and the true condition has not been discovered until the patients failed to die as per schedule and following anti-syphilitic treatment have improved, although it must be said that the stomach never returns to its normal shape.

As for the occurrence of an actual ulcer, we must concede that it is possible, and probably does occur. Yet the operative reports on syphilitics which have been explored for ulcer have usually failed to reveal ulcer. We have three or four cases in this Hospital which I remember. As for the other symptoms, I think we are as much at a loss from the radiographic as we are from the clinical point of view. To a large extent our conclusions are drawn from altered motility of the gastrointestinal tract. We believe that these follow alterations in the normal reflexes of the gastrointestinal tract, all of which we do not yet fully understand. These reflexes are naturally under central nervous control and naturally any central nervous disease may modify these reflexes. My own experience has been rather disappointing in these cases. Twice I have been saved from making a fatal error. Two patients with a history of peptic ulcer came for examination showing fairly typical pictures of ulcer radiographically. When I examined them in the dark room they complained of being dizzy and one of them nearly fell. On examination I found a definite Romberg. Such evidence was not purely radiographic and waiving the usual rule on the evidence of the Romberg, I did not

make the diagnosis of peptic ulcer. The remainder of the cases have looked very much like appendicitis. In most instances they have not been very convincing. I think that is about our attitude in the matter. We concede that syphilis may simulate practically any condition radiographically and that we commonly find any of the surgical conditions simulated. I know of no way to differentiate.

DR. BARSS: If these patients don't improve under anti-syphilitic treatment, perhaps they have appendicitis.

DR. VAN ZWALUWENBURG: On the other hand, with the altered central control of reflexes I doubt whether we can draw any conclusions.

DR. BARSS: In the first case it is interesting to note that after four operations he can feel perfectly well even with anti-syphilitic treatment.

DR. VAN ZWALUWENBURG: A radiographic diagnosis of appendicitis does not mean that the appendix is still there. What we recognize are the changes consecutive to the appendicitis or an operation.

DR. NEWBURGH (Closing the discussion): Dr. Barss's remarks about gastric crises bring up the important point that syphilis causes gastrointestinal disturbances which are not typical gastric crises. We have heretofore waited for the typical picture before making the diagnosis. Perhaps half of these cases do not have the typical crises. They may simulate any of the formal varieties of the gastrointestinal diseases. The history of the attack is of no help unless it is a history of a crisis. The history may suggest hyperacidity or ulcer or carcinoma or anything. The important point is to remember that a number of persons complaining of a variety of gastric disturbances may be suffering from lues of the central nervous system and the final diagnosis can only be made by keeping that in mind in every case and excluding central nervous system involvement in every case of gastrointestinal disease.

RECOVERY OF A CASE OF PURULENT MENINGITIS COMPLICATING MASTOIDITIS.

D. O. WALTHALL, M.D.

(From the Pediatric Clinic, University Hospital, Ann Arbor, Michigan).

The rarity of recovery from otitic meningitis was the incentive for reporting this case and discussing the condition. The mortality of this disease is over 90 per cent and until 1893 when Macewan reported six recoveries out of twelve cases, no serious attempt had been made to treat suppurative otitic meningitis. Meningitis follows chronic otitis twice as frequently as it does the acute form. In the acute otitis the fulminating and explosive type of meningitis occurs, while in chronic otitis the onset is insidious and it may be from a few days to several months before the meningitis is clearly defined. Usually when the symptoms are serious enough to call for operation the chances of recovery are gone. Therefore mastoidectomy and decompression should be regarded as exploratory oper-

tions and resorted to with the same freedom as in doubtful appendicitis and other abdominal riddles. The surgical treatment then becomes prophylactic.

CASE I. Small girl, age 7 years, had earache and discharge from the ear in January, 1917. She had good health until August 25th when she developed pain in the right side of the head and a sensation of something breaking in the ear but no discharge. She entered the Hospital September 15th with the same symptoms. Paracentesis done on the right ear and September 18th, a right mastoid operation. She had an uneventful convalescence and went home September 29th against advice. On October 13th she developed a temperature and felt dizzy. She returned to the Hospital on October 16th and was seen in consultation on October 18th because of temperature. A history of vomiting during the night and morning was obtained. She had a slight head-

of foul pus which saturates the dressings. There is no temperature and the patient is up and playing about the ward.

The following case although it cannot be included under the same heading deserves brief mention, owing to its resemblance to the above.

CASE II. Female, age 42, married. The family history, past history and marital history have no bearing. On November 15th she was suddenly taken with a sharp pain in the head. The pain was so great that the patient became practically irrational from the first and was confined to bed. On November 7th the right ear drum perforated and discharged. At this time the pupils were widely dilated. On November 10th vomiting began. During all this time the patient's temperature ranged from 102 to 105 degrees. On November 11th she became unconscious. November 14th she entered the Con-

CHART OF PUNCTURES AND TEMPERATURES.

Date	Temp.	Amount fluid c. c.	Turbidity	Total cells	Differential		Organisms
					Polys.	Lymph.	
10-18	103.6	30	Pus	1800	60	40	Gram +
10-19	101.6	15-20	Cloudy	1300	69	31	No definite organisms
10-20	105	30	Pus	5460	80	20	Rare cocci with M. B.
10-21	103.6	10	Pressure + Cloudy	1100	60	40	Stained smear 0
10-23	100.8	10-15	Cloudy	570	25	65	Stained smear 0
10-24	100.4	35	Cloudy	760	30	70	Stained smear 0
10-30	98.6	20-25	Pressure + Opalescent	160	11	88	Stained smear 0
11-7	98.6	20-25	Clear	30	All lymph.		Culture 7 out of 10 tubes
11-17	98.4	20-25	Pressure normal Clear	40	All lymph.		+ staph. Culture 0
12-1	97.8	30-35	Pressure normal Clear	10	All lymph.		Culture +, staph.
			Pressure +				

ache and did not want to be disturbed.
Examination.—Cheeks flushed and dark circles under her eyes; lips dry; cervical glands enlarged; head slightly drawn back. Patient more comfortable when lying on the side. Neck very stiff. No neck sign (Brudzinski). Pain in the right ear. Mastoid wound not filled in but clean. Eyes; lateral nystagmus, slight diplopia. Pupils dilated but react. Eye-grounds not done. Knee jerks lively. Babinski suggestive at times. Kernig slightly positive. General physical examination normal. White blood count 19,000.
The mastoid wound still did not fill in and remained the same with practically no discharge. On the morning of November 27th the dressing was changed and was clean. During the early evening the nurse noticed a very foul odor in the mastoid region. The dressings were changed and were found saturated with foul pus. A sterile saline irrigation was given. The mastoid wound is being dressed every day at which time there is a large evacuation

tagious Hospital under a mistaken diagnosis. The temperature was 104 degrees, pulse 108, respiration 36.
Examination.—Patient unconscious; head drawn back and to the left; definite stiff neck and neck sign. Very irritable during the examination and cries out each time she is touched or moved. Pupils sluggish to light. Ears; left drum normal; right drum bulging and red. Paracentesis freed a large amount of thick pus. Reflexes all much exaggerated; definite and marked double Kernig. Tache cerebral present. Heart lungs, and abdomen normal. White blood count 35,000. Lumbar puncture: 30 c. c. of turbid fluid under much increased pressure came away. Total cells 1000 per c. c. Polymorphonuclears 98 per cent Lymphocytes 2 per cent. On standing a few minutes, coagulation occurred. Smear showed Gram positive diplococci-pneumococcus. Group 3 by agglutination. Repeated lumbar punctures were done which showed a steady increase in cells and organisms. The patient did not rally but

developed rales and pneumonia in the left lower lung and died November 16th.

Post-mortem. "Chronic otitis media on the right side, with complete destruction of the ossicles and purulent infiltration and necrosis of the greater portion of the petrous temporal upon the right. Pneumococcus infection. Acute fibrinopurulent leptomeningitis. Metastatic miliary abscess of the kidney. Acute passive congestion of all organs."

I want to thank Dr. Weller for the autopsy report and Robert Novy for the bacteriologic work.

CONCLUSIONS.

1. Early diagnosis must be made before the textbook symptoms appear.
2. Every mastoid operation should be preceded by a lumbar puncture.
3. Otitic meningitis is a preventable disease made so by prompt and effective prophylaxis through surgical intervention.

DISCUSSION.

DR. ALBERT C. FURSTENBERG: The first case has been of especial interest to us because so far it seems to demonstrate an apparent recovery. When this patient entered the Hospital there were all the characteristic signs and symptoms of suppurating middle ear and mastoid infection with a large subperiosteal abscess. At operation it was discovered that there was a fistulous tract extending from the mastoid process upward and downward deep into the petrous portion of the temporal bone to its roof. At its termination the dura was uncovered and there was found a small area of external pachymeningitis about one centimeter in diameter. The bone was removed until healthy dura surrounded it on all sides. A very extensive mastoid operation was performed, the entire sigmoid sinus was uncovered and all the mastoid cells deep into the temporal bone and the tip were removed. After the operation granulation took place promptly. On the twelfth day after operation, on account of financial reasons, the child was discharged against advice. The ear was practically dry and the tympanic membrane had assumed its normal appearance. About a month later the patient was brought into the Hospital with a history of nausea, vomiting, and dizziness. The patient showed a temperature of 102 degrees. At the time that the pediatricians were called over there were no very characteristic signs of meningitis, the Kernig was not demonstrated positively and the rigidity of the neck might well have been due to the mastoid operation. There was a slight dilatation of the pupils and a temperature. The lumbar puncture, however, showed that the fluid was purulent. At this time it became a question as to whether or not another operation should be performed. All of the otologists who report cures report them after radical procedures with removal of a large part of the petrous portion of the temporal bone exposing the dura and making numerous incisions into the dura for drainage. It did not seem feasible to do this and form new avenues for the entrance of infection. From the signs and symptoms and progress of the disease it would seem quite evident that the pathology was circumscribed and not diffuse. I believe, however,

that operation should be instituted in cases of meningitis before the patient becomes in an extreme condition and that a radical operation should be performed to remove the focus of infection. But when dealing with a circumscribed subdural process and where there is good drainage it does not seem advisable to incise extensively the dura and break down the barriers in the subdural space that have already formed.

DR. MAX PEET: Dr. Walthall spoke of the Haynes operation for general meningitis. This operation appears to me to offer the best opportunity for drainage in these cases. And it is by drainage alone that we can hope for a reduction in the mortality. The mastoid operation, extended to expose the dura, gives excellent results in very localized meningitis of otitic origin. But in generalized meningitis, and we are here speaking of those due to such organisms as the staphylococcus, streptococcus, and pneumococcus, not from the diplococcus of Weichselbaum, it is impossible to expose the entire area involved and our only recourse is free drainage which reduces the terrific intracranial pressure, removes an enormous amount of infected and toxic material, and gives the body a chance to combat the disease by natural methods. We believe implicitly in the evacuation of pus and drainage in all other parts of the body, why should not the same procedure be applied to the meninges? The Haynes operation opens the cisterna magna at its most dependent part and allows of the evacuation, by the finger if necessary, of thickened masses of pus, and the continued free drainage of infected cerebrospinal fluid. The operation can be performed in one-half hour and in many cases little or no anesthesia is required. There are no vital structures to be injured until the dura is exposed and the operation can be performed by anyone who has had experience in cerebellar surgery.

I think that repeated lumbar punctures are beneficial, but they are at most palliative, not curative.

I have performed the Haynes operation once, on a case of streptococcus meningitis. The man had been unconscious three days and was sent in with a diagnosis of peritonitis. On opening the cisterna magna great quantities of pus containing large flakes were evacuated. The fluid resembled that obtained on opening an empyema of several days duration.

A half hour after operation he had regained consciousness and asked for a glass of water. He died the next day.

The value of any operation such as the Haynes depends upon how soon it is performed after the onset of the disease. I personally have never seen a case of purulent meningitis recover other than those due to the meningococcus.

DR. WALTHALL: How many Haynes operation cases have recovered?

DR. PEET: At the time I operated, the Haynes operation had been performed about fourteen times. All these patients had died. But no case so far as I know has been properly drained by the Haynes operation early in the disease. I think, however, that any case of purulent meningitis when the condition has spread to the ventricles is sure to die unless operated upon, and since it is otherwise a hopeless condition, there is not reason why these patients should not be given the one chance which is open to them.

Official Minutes

of the

Mid-winter Meeting of the Council

Detroit, January 23, 1918

The regular mid-winter meeting of the Council of the Michigan State Medical Society was called to order by the Chairman, Dr. W. T. Dodge, in Hotel Statler, Detroit, on January 23rd, 1918, at 10 A. M. with the following Councilors present: Southworth, Seeley, Kay, DuBois, Baker, Dodge, Hume and Bulson.

Absent: Councilors Buckland, Witter, Church, Keifer, Rockwell, McMullen.

President Biddle, Treasurer Welsh and the Secretary-Editor were in attendance.

The minutes of the last meeting of the Council as published in the *Journal* were approved on motion of Councilor DuBois, supported by Councilor Southworth.

The Secretary-Editor presented his Annual Report as follows:

SECRETARY-EDITOR'S ANNUAL REPORT. FISCAL YEAR, 1917.

To the Chairman and Council,
Michigan State Medical Society.
Gentlemen:

For the fifth consecutive year it is my honor and privilege to submit to you and through you to our component membership, this my annual report and recapitulation for the Society's fiscal year 1917. Appended hereto is the audit of the books attested to by a certified accountant.

At the Special Meeting of the Council held on Nov. 7, 1917, I submitted in somewhat lengthy detail a review of the present status of our membership and County Society activities. There is but little to add to the discussion then presented. I do plead, however, that you as officers cause the activities of the Societies in your respective districts to be of more than passive concern. The year upon which we have just entered promises to be fraught with events that will directly influence our organizational life. It is therefore imperative that we extend such effort and energy as will enable us to surmount whatever problems may present.

REQUEST FOR CHARTER.

I present for your action a request for a charter from the physicians of Oceana County. This request is approved by the Councillor of that district. This request if granted will make it incumbent upon you to revoke the name of Muskegon-Oceana from that organization and redesignate that Society in compliance with their request.

Dr. W. T. Dodge,
Big Rapids, Mich.

Dear Doctor:

Your letter of December 21st regarding formation of a new society in our county received. In reply would say we met and elected the following officers:

President—J. H. Nicholson, Hart.
Vice-President—W. L. Griffin, Shelby.
Secretary—A. R. Hayton, Shelby.
Treasurer—G. F. Lamb, Pentwater.

We hereby make application for a charter for the Oceana County Medical Society.

In asking for this charter we assure you we hold the members of the Muskegon Society in highest esteem and it is only the inconvenience in attending the meetings that prompted us to ask for a charter.

Yours very truly,
J. H. NICHOLSON.

MEMBERSHIP.

The following is a recapitulation of our membership numerical strength.

County	Mem. Paid	Unpaid	Hon. Mem.
Alpena	17	2	
Antrim	24	3	
Barry	2	0	
Bay	48	10	
Benzie	6	0	
Berrien	34	1	
Branch	18	0	
Calhoun	96	2	1
Cass	8	0	
Cheboygan	5	1	
Chippewa	28	0	
Clinton	23	1	
Delta	18	5	
Dickinson-Iron	13	4	
Eaton	33	4	
Genesee	89	3	

Gogebic	13	0	
Grand Traverse	25	2	
Hillsdale	15	2	
Houghton	54	4	
Huron	18	0	
Ingham	68	1	1
Ionia	25	2	
G. I. C.	34	9	
Jackson	50	4	
Kalamazoo Academy	131	11	1
Kent	148	11	1
Lapeer	26	1	2
Lenawee	25	7	
Livingston	11	3	
Macomb	21	5	
Manistee	13	1	
Marquette	37	5	1
Mason	6	4	
Mecosta	14	1	
Menominee	13	2	
Midland	8	0	
Monroe	23	0	
Montcalm	25	1	
Muskegon	43	0	
Newaygo	6	1	
Oakland	49	2	
O. M. C. O. R. O.	14	1	
Ontonagon	10	0	
Osceola	7	0	
Ottawa	16	6	
Presque Isle	2	1	
Saginaw	47	8	
Sanilac	17	0	
Schoolcraft	7	0	
Shiawassee	24	5	
St. Clair	52	2	
St. Joseph	6	6	
Tri County	25	1	
Tuscola	23	5	
Washtenaw	65	7	
Wayne	826	99	
	2504	256	7

DEATHS.

Twenty-nine of our members have answered the final summons.

ANNUAL MEETING.

President Biddle, after a careful review of conditions and the holding of a conference with the members of the Calhoun County Society has, by the authority vested in him, selected the dates of May 7, 8 and 9 as the time for the holding of our Annual Meeting in Battle Creek.

In view of the conditions arising from the war, also because a number of Calhoun County physicians are in active service it is deemed advisable that the expenses entailed in the holding of our Annual Meeting be defrayed by the State funds.

Your Secretary requests authority to issue vouchers for these expenses as they arise.

FINANCIAL REPORT.

I herewith submit a general and itemized statement of the funds of the Society and expenditures during 1917:

Jan. 12, 1918.

To the Council of the Michigan State Medical Society. Dr. F. C. Warnshuis, Secretary.

Gentlemen:

I have completed the examination of the books and accounts of the Michigan State Medical Society for the year ending December 31, 1917, and I am pleased to submit the following exhibits:

Exhibit A.

Certificate of Deposit	\$1,500.00	
Annual Meeting	202.54	
Bond Account	6,300.00	
Bond Account (Patriotic Fund)	1,000.00	
G. R. Savings Bank	971.45	
G. R. National City Bank	1,650.37	
Accounts Receivable	1,272.74	
Journal Expense	5,756.92	
State Society Expense	1,793.50	
Council Expense	147.31	
Reprint Expense	951.20	
Membership Dues		\$ 2,321.18
Journal Subscription		3,511.79
Defense Fund		19.00
Advertising Sales		3,742.66
Reprint Sales		957.40
Extra Journal Sales		2.50
Interest Received		285.78
Present Worth		3,055.35
Patriotic Fund		2,650.37
	\$21,546.03	\$21,546.03

Exhibit B.

Statement of Revenue and Expenses for 1917.

<i>Revenue—</i>		
Membership Dues	\$2,321.18	
Journal Subscriptions	3,511.79	
Advertising Sales	3,742.66	
Reprint Sales	957.40	
Sale of Extra Journals	2.50	
Interest Received	285.78	
		\$10,821.31
<i>Expense—</i>		
Journal	\$5,756.92	
State Society	1,793.50	
Reprints	951.20	
Council	147.31	
Annual Meeting	202.54	
		\$ 8,851.47
Net gain for the year 1917	\$ 1,969.84	

Exhibit C.

Balance Sheet January 1, 1918.

Assets.

<i>Current—</i>	
Checking Account G. R. Savings Bank	\$ 971.45

Patriotic Fund G. R. National

City	1,650.37
Accounts Receivable	1,272.74
	<u>\$ 3,894.56</u>

Investments—(In Custody of Treas.) Except *

Certificate of Deposit Account \$1,500.00	
Masonic Temple Bonds	2,300.00
Citz. Telephone Co. Bonds	2,000.00
Liberty Bonds	2,000.00
*Liberty Bond (Patriotic Fund) 1,000.00	
	<u>\$ 8,800.00</u>

Total Assets\$12,694.56

Liabilities.

Current—

Due Defense Fund	\$ 19.00
Patriotic Fund	2,650.37
	<u>\$ 2,669.37</u>

Net Present Worth\$10,025.19

Present Worth.

Represented by Jan. 1, 1917 ..	\$8,055.35
Net Gain for 1917	1,969.84
	<u>\$10,025.19</u>

The checking account of the Grand Rapids Savings Bank was reconciled as of December 31, 1917.

The Patriotic Fund at the Grand Rapids National City Bank was reconciled as of December 31, 1917.

The bonds and Certificates of Deposit are in the hands of the Treasurer, Dr. D. E. Welsh.

I am pleased to advise for your information that the books and accounts of the Michigan State Medical Society are in good condition and the above Balance Sheet, Exhibit C, in my opinion represents the true financial condition of the Michigan State Medical Society as of January 1, 1918.

Thanking you for the work, and awaiting further opportunities to serve you, I am

Yours very truly,

WALTER H. SHULTUS,

Certified Public Accountant.

My certificate is dated March 7, 1916.

JOURNAL EXPENSE, 1917.

JANUARY—

Tradesman Co., Journal and wrappers	\$347.25
Postmaster, mailing Journal	9.44
Citz. Tel. Co., Long distance	1.00
20th Century C. B. Dec.	3.50
J. S. Crosby Co., insurance	3.00
Dr. F. C. Warnshuis, office rent	20.00
G. R. Typewriter Co.	1.00
Miss Pinckney, Jan. salary	28.75
Dr. F. C. Warnshuis, salary	75.00

\$489.04

FEBRUARY—

Tradesman Co., Feb. Journals	\$312.69
G. R. Typewriting Co.	1.02
Postmaster, mailing Journals	8.08
20th Century C. B.	3.50
Dr. F. C. Warnshuis, salary	75.00
Miss Pinckney, salary	32.50

\$432.79

MARCH—

Tradesman Co., March Journals	\$407.33
Postmaster, mailing Journals	10.25
20th Century C. B.	3.50
G. R. Typewriting Co.	1.36
Dr. F. C. Warnshuis, rent	20.00
Dr. F. C. Warnshuis, salary	75.00
Miss Pinckney, salary	32.50

\$549.94

APRIL—

Tradesman Co., April Journals	\$440.40
Postmaster, mailing Journals	10.44
20th Century C. B.	3.50
Dr. F. C. Warnshuis, salary	75.00
Miss Pinckney, salary	32.50

\$561.84

MAY—

Tradesman Co., May Journals	\$358.78
20th Century C. B.	3.60
Postmaster, mailing Journals	9.54
G. R. Typewriting Co. ....	.75
Dr. F. C. Warnshuis, salary	75.00
Miss Pinckney	32.50
Dr. F. C. Warnshuis, rent	20.00

\$500.07

JUNE—

Tradesman Co., June Journals	\$431.90
Postmaster, mailing Journals	10.97
20th Century C. B.	3.50
Dr. F. C. Warnshuis, June and July salary	150.00
Miss Pinckney, June salary	32.50

\$628.87

JULY—

Tradesman Co., July Journals	\$310.00
Postmaster, mailing Journals	7.88
20th Century C. B.	3.50
G. R. Typewriting Co.	1.45
Dr. F. C. Warnshuis, rent	20.00
Miss Pinckney, salary	32.50

\$375.93

AUGUST—

Dr. F. C. Warnshuis, salary	\$ 75.00
20th Century C. B.	3.50
G. R. Typewriting Co. ....	.75
Postmaster, mailing Journals	10.00
Tradesman Co., August Journals	378.21
Miss Pinckney, August salary	32.50
Miss Bond, salary 8-13 to 9-13	27.50
Dr. F. C. Warnshuis, September rent	10.00

537.46

SEPTEMBER—

Tradesman Co., September Journal	\$305.65
Tradesman Co., wrappers	26.50
20th Century C. B.	3.50
Postmaster, mailing Journals	7.47
Dr. F. C. Warnshuis, salary	75.00
Miss Bond, salary 9-13 to 10-1	15.58
Dr. F. C. Warnshuis, October rent	10.00

\$443.70

OCTOBER—

Tradesman Co., October Journal	\$238.25
20th Century C. B.	3.50
Postmaster, mailing Journals	6.13
Dr. F. C. Warnshuis, salary	75.00
Dr. F. C. Warnshuis, November rent	10.00
Miss Bond, Oct. salary and Msc. Exp.	28.25

\$361.13

NOVEMBER—

Postmaster, mailing Journals	\$ 6.39
20th Century C. B.	3.50
Tradesman Co., Nov. Journals	288.00
Western Union .....	.25
Dr. F. C. Warnshuis, Nov. salary	75.00
Dr. F. C. Warnshuis, Dec. rent	10.00
Miss Bond, Nov. salary	27.50

\$411.14

DECEMBER—

Tradesman Co., Dec. Journals	\$340.78
Postmaster, mailing Journals	8.23
20th Century C. B.	3.50
Dr. F. C. Warnshuis, Jan. rent	10.00
Dr. F. C. Warnshuis, Dec. salary	75.00
Miss Bond, Dec. salary	27.50
	<hr/>
	\$465.01
	<hr/>
	\$5,756.92

SOCIETY EXPENSE, 1917.

JANUARY—

Postmaster, postage	\$ 25.00
Bixby Office Supply Co.	12.52
J. S. Crosby Co., Insurance	3.00
Dr. F. C. Warnshuis, office rent	20.00
Decker & Jean, insurance on clerk	10.00
Miss Pinckney, salary	28.75
Dr. F. C. Warnshuis, salary	75.00
	<hr/>
	\$174.27

FEBRUARY—

Postmaster, postage	\$ 25.00
Fox Typewriter Co. ....	.50
Western Union	5.44
Barlow Bros.	14.50
W. H. Shultus	11.00
Dr. F. C. Warnshuis, salary	75.00
Miss Pinckney, salary	32.50
Dr. D. E. Welsh, Honorarium	100.00
	<hr/>
	\$263.94

MARCH—

Postmaster, postage	\$ 25.00
J. A. Thompson	2.75
Bixby Office Supply Co.	5.80
Dr. F. C. Warnshuis, rent	20.00
Dr. F. C. Warnshuis, salary	75.00
Miss Pinckney, salary	32.50
	<hr/>
	\$161.05

APRIL—

Postmaster, postage	\$ 20.00
Fox Typewriter Co.	2.50
G. R. Typewriting Co.	2.40
Western Union .....	.41
Dr. F. C. Warnshuis, salary	75.00
Miss Pinckney, salary	32.50
	<hr/>
	\$132.81

MAY—

Postmaster, postage	\$ 20.00
Powers-Tyson Printing Co., envelopes....	6.00
G. R. Typewriting Co., letters	1.85
Dr. F. C. Warnshuis, salary	75.00
Miss Pinckney, salary	32.50
Dr. F. C. Warnshuis, office rent	20.00
	<hr/>
	\$155.35

JUNE—

Tradesman Co., registration blanks	\$ 3.00
Bixby Office Supply Co.	1.55
Dr. F. C. Warnshuis, June and July salary	150.00
Miss Pinckney, salary	32.50
Postmaster, postage	10.00
	<hr/>
	\$197.05

JULY—

Postmaster, postage	\$ 10.00
Dr. F. C. Warnshuis, office rent	20.00
Miss Pinckney, salary	32.50
	<hr/>
	\$ 62.50

AUGUST—

Dr. F. C. Warnshuis, salary	\$ 75.00
Bixby Office Supply Co. ....	.50
Powers-Tyson Printing Co., Ledger sheets	16.75
Dr. F. C. Warnshuis, September rent....	10.00
Postmaster, postage	10.00
Miss Pinckney, salary	32.50
Miss Bond, salary 8-13 to 9-13	27.50
	<hr/>
	\$172.25

SEPTEMBER—

Postmaster, postage	\$ 10.00
Dr. F. C. Warnshuis, salary	75.00
Miss Bond, salary 9-13 to 10-1	15.58
Dr. F. C. Warnshuis, October rent	10.00
	<hr/>
	\$110.58

OCTOBER—

Bixby Office Supply Co.	\$ 1.40
Dr. F. C. Warnshuis, salary	75.00
Dr. F. C. Warnshuis, November rent	10.00
Miss Bond, salary and Misc. Exp.	28.30
Postmaster, postage	5.00
	<hr/>
	\$119.70

NOVEMBER—

Postmaster, postage	\$ 3.00
Dr. F. C. Warnshuis, salary	75.00
Dr. F. C. Warnshuis, Dec. rent	10.00
Miss Bond, salary	27.50
	<hr/>
	\$115.50

DECEMBER—

Powers-Tyson Printing Co., envelopes....	\$ 11.00
Postmaster, postage	5.00
Dr. F. C. Warnshuis, January rent	10.00
Dr. F. C. Warnshuis, salary	75.00
Miss Bond, salary	27.50
	<hr/>
	\$ 128.50
	<hr/>
	\$1,793.50

COUNCIL EXPENSE, 1917.

TO DETROIT—

Drs. Warnshuis, DuBois and Welsh	\$ 26.58
Dr. A. H. Rockwell	14.49
Dr. W. T. Dodge	20.50
Dr. S. K. Church	9.05
Dr. F. C. Witter	27.99
Dr. DuBois	10.20
Statler Hotel, A. E. Bulson	3.00
	<hr/>
	\$147.31

TO GRAND RAPIDS—

Dr. F. C. Witter	\$ 16.77
Dr. A. P. Biddle	8.77
	<hr/>
	\$147.31

ANNUAL MEETING.

Dr. A. P. Biddle	\$ 9.25
Dr. H. W. Dewitt	7.08
Western Union .....	.38
Dr. E. M. Highfield	4.34
Dr. I. M. Rubinoer	68.00
Tradesman Co., programs	2.95
W. E. Cornell, reporter	10.00
Post Tavern, Miss Pinckney	3.55
Miss Pinckney's fare to B. C.	3.10
Dr. C. S. Gorsline	81.40
Dr. F. C. Warnshuis, to Kal. and B. C.	14.50
	<hr/>
	\$202.54

The following figures covering a period of five years, my tenure of office, are interesting:

	Journal	Adv.	No.	Net
	Cost	Receipts	Mem.	Worth
1917 ...	\$5,756.92	\$3,742.66	2,504	\$10,025.19
1912 ...	3,821.90	1,851.92	2,168	5,427.46

Net gain \$1,935.02 \$1,890.74 336 \$ 4,597.73

COMPARATIVE STATEMENT.

1916-1917.

	Journal	Adv.	No.	Net
	Cost	Receipts	Mem.	Worth
1917 ...	\$5,756.92	\$3,742.66	2,504	\$10,025.19
1916 ...	5,181.74	3,302.24	2,486	8,055.35
	<hr/>	<hr/>	<hr/>	<hr/>
Net gain \$	575.18	\$ 440.42	18	\$ 1,969.84

THE JOURNAL.

The *Journal* has created its own field in our organizational activities and such is self-commentary. I have no recommendations regarding it. Increased cost of production has been practically counter balanced by increased advertising receipts. In this we have been fortunate and for that reason alone are we able to report a profit in place of a deficit in the management of our publication.

Respectfully submitted,
F. C. WARNSHUIS,
Secretary-Editor.

The Chairman referred the several parts of this report to the Council's Committees.

COMMUNICATIONS.

President Biddle announced that he had selected the dates of May 7, 8, 9, 1918, for the Annual Meeting of the Society to be held in Battle Creek.

A communication relative to governmental tax on incomes from the Ohio State Society was read and filed.

A communication was received from the officers of the Muskegon-Oceana County Society was read requesting that the name of their Society be changed to the Muskegon County Society. Referred to Committee on County Societies.

The Secretary reported on the condition of Councillor McMullen. On motion of Councillor Bulson supported by several the Secretary was instructed to send Councillor McMullen greetings and wishes for a complete recovery.

The Secretary announced that to fill vacancies President Biddle had made the following appointments:

Chairman, Section of Medicine—J. Wilson, Detroit.

Secretary, Section on Ophthalmology and Oto-Laryngology—Ferris N. Smith, Grand Rapids, Mich.

Councillor Hume moved that the appointments of the President be confirmed. Carried.

Treasurer Welsh presented the following report:

TREASURER'S ANNUAL REPORT.

To the Council of the

Michigan State Medical Society.

Gentlemen:

The following will convey to you the amount of funds of the Michigan State Medical Society in my hands for the year ending December 31, 1917:

Citz. Tel. Co. Bonds, No. 139-140....	\$2,000.00
Certificate of Deposit, Citz. State Bank 3170, 3/31/15	1,000.00
Certificate of Deposit, Citz. State Bank 25719, 4/16/17	500.00
Liberty Bonds—	
No. 8450, 3½ per cent.	500.00
No. 8453, 3½ per cent.	500.00
No. 106478, 3½ per cent.	1,000.00
Masonic Temple Bonds—	
18 No. 199-216 Inc.	2,300.00
5 No. 225-229 Inc.	
	<hr/>
	\$7,800.00

The following will convey to you the amount of funds on hand in the Defense Fund for the year ending December 31, 1917:

Two \$500 Liberty Bonds	\$1,000.00
Certificate of Deposit No. 07844	
Grandville State Bank 2/17/17	360.00
Certificate of Deposit No. 08831	
Grandville State Bank 10/24/17	354.72
	<hr/>
	\$1,714.72

Balance in checking account Peoples

State Bank	398.36
Grand Total	\$2,113.08

Respectfully submitted,

D. EMMETT WELSH, Treasurer.

Referred to the Finance Committee.

Dr. F. B. Tibbals, Chairman of the Medico-Legal Committee presented the following report:

MEDICO-LEGAL COMMITTEE'S REPORT.

To the Council

Michigan State Medical Society:

The past year has been one of activity in this department for we have tried nine cases, winning all but one, have had twenty-six new cases reported, have paid out over \$2,400 for legal services, and have a small bank balance with which to start 1918.

An increase in trial cases is noticeable the past few years quite tracable to the workings of the Compensation Act where the doctor is made the "Goat." One particular instance of this is a case of injury by an insured automobile, followed by tubercular hip joint disease, with suit against the doctor for not making an early diagnosis. While this case is not strictly a compensation case it illustrates well several of our cases where liability of an Insurance Co. is passed along to the doctor.

Our income will be much reduced this year by the action of the Council in relieving members in government service of the Medico-Legal dues. Whether an equalizing lessening in suits will occur remains to be seen. If not this Fund will need to fall back on the existing reserve of \$1,500.00, or borrow money from the Council provision for which already exists.

We can reduce expenses somewhat but not enough to handle any increase in suits.

Respectfully submitted,

FRANK BURR TIBBALS, Chairman.

Referred to Committee on County Societies.
A recess was then taken.

The Council coming to order Councilor Bulson presented following recommendations:

(1) That a charter be granted to the applicants from Oceana County.

(2) That the request of Muskegon officers to change the name of their society to the Muskegon County Society be granted.

(3) That our Annual Meeting be held May 7, 8, 9 in Battle Creek and the expenses of that meeting be defrayed by Society funds.

(4) That all social features of the Annual Meeting at Battle Creek be eliminated.

Moved by Councilor DuBois supported by Councilor Baker that the report be adopted. Carried.

Councilor Seeley, Chairman of the Finance Committee submitted the following report:

Venosal.—The Council on Pharmacy and Chemistry reports that Venosal, sold by the Intravenous Products Company, Denver, Colo., is inadmissible to New and Nonofficial Remedies because its chemical composition is indefinite; because the therapeutic claims are exaggerated, and because the composition is unscientific. Venosal is a solution of sodium salicylate containing also colchicum and an insignificant amount of iron. Since it is possible to obtain the salicylate effects promptly and certainly by oral administration, the inherent dangers of intravenous modification render its routine employment unwarranted. At this time, when economy is a national policy, a further objection to the use of Venosal is the unnecessarily high expense of Venosal itself and the administration. (*Jour. A.M.A.*, Jan. 5, 1917, p. 48).

Our Archaic Patent Laws.—The reports of the Council on Pharmacy and Chemistry on Secretin-Beveridge and the Need for Patent Law Revision are opportune. At the request of the National Research Council the "Patent Office Society," an asso-

Your committee has reviewed the financial reports of the Secretary and Treasurer and express their approval and endorsement.

Your committee further desires to congratulate the Secretary-Editor upon the splendid showing made in his report.

Moved by Councilor Hume supported by Councilor Southworth that the Committees report be adopted. Carried.

Councilor Kay, supported by several, moved that the Chairman cast the entire vote of the members present for the re-election of F. C. Warnshuis as Secretary-Editor for the ensuing year. Carried.

The Chairman did so cast and declared F. C. Warnshuis elected as Secretary-Editor for the ensuing year.

Moved by Councilor Seeley, supported by Councilor Baker, that the Chairman cast the ballot of those present for D. Emmett Welsh as treasurer. Carried.

The Chairman declared D. Emmett Welsh elected treasurer for the ensuing year.

On motion of Councilor DuBois, supported by Councilor Baker, the Secretary was instructed to pay Treasurer Welsh, One Hundred Dollars as an honorarium for his services during 1917. Carried.

There being no further business the Council adjourned.

W. T. DODGE, Chairman.

F. C. WARNSHUIS, Secretary.

ciation of employees of the U. S. Patent Office, has created a committee to study the U. S. Patent Office and its service to science and to arts. There is no question that one of two things is needed: either a radical change in the patent law itself or the application of more brains in its administration. Now the United States Patent Law is too often used to obtain an unfair monopoly of a medicament or to abet quackery (*Jour. A.M.A.*, Jan. 12, 1918, p. 95).

Dionol.—If physicians take the word of the Dionol Company, and therapeutic possibilities of Dionol are apparently limited only by the blue sky. Even the company admits that "the unprecedented range of action" of this marvel "may come as a surprise." A glance over the published case reports confirms the inference. Dionol is furnished in two forms: as an ointment and as an emulsion. Dionol itself is a sort of glorified petrolatum, the use of which is said to prevent the leakage of energy from the nerve cells, and by overcoming the short-circuiting always said to be present in inflammations, is asserted to accomplish its wonders. (*Jour. A.M.A.*, Jan. 26, 1918, p. 257).

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Arthur M. Hume, Chairman.....	Owosso
Guy L. Klefer	Detroit
W. J. Kay.....	Lapeer
W. J. DuBois.....	Grand Rapids

EDITOR
FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
Grand Rapids, Mich.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

March

Editorials

MEDICAL ETHICS.

Definition: Medical ethics is that code of conduct existing among doctors which promotes the highest interests of the individual and maintains the profession in a dignified and honorable position before the general public.

The general tendency among the profession at large is too look upon this subject as one of little more than academic interest, the conventions of which have become more or less permanently fixed by tradition and custom, in which the last word has been said when one can repeat the Hippocratic oath. Inasmuch as this subject not only determines the physician's attitude toward his colleagues but toward the rest of society as well, it follows that a great deal of practical benefit might be derived if more space were devoted to its discussion in the professional literature. Questions are continually arising in these modern times touching on the relation of the medical profession to the public at large and it is only through a free discussion of these problems that a broad definite policy can be assumed by our organizations. One of the most sweeping examples of such questions is the proposal of a National Health Insurance Act, excerpts of which we published some time ago in these columns. The whole future welfare of the profession hinges upon

whether or not such legislation is enacted and what the character of it will be if it is. Nevertheless, we as an organization have not yet assumed a definite policy toward it nor have we even aroused ourselves to an intelligent discussion of it beyond an occasional out-burst from a few of the more alert. Judging from the ideas we have seen expressed on the subject, it is apparent that few are well informed enough to deal with such a revolutionizing proposal without undue prejudice. However, the effort made by the *J.A.M.A.* to collect some data on the subject as well as opinions, is commendable.

The introduction in late years of large, endowed hospital institutions with free clinics, the immense scope of modern public health work, the development of scientific medical education and training, the medical service required by large corporations, these and many other changes of recent times involve a change in not only the relations of doctors to one another but to the general public as well. Whether we become passive victims of these new forces in our social organization or, on the other hand, exert an active influence in maintaining an equitable and honorable standing for the profession depends upon our being able to foresee these issues as they arise and shaping a definite policy toward them.

With these ideas in mind, we propose to take up a discussion of medical ethics in these columns and invite correspondence from our members. In this way we hope to arrive at the basis of our differences in the matter of professional conduct so that a uniform policy may be adopted.

THE NEEDS OF THE MEDICAL SERVICE.

Under the above caption, Lieut. Col. R. E. Noble, M. C., U. S. A., presented before the last meeting of the Southern Medical Association, a most admirable paper, which convincingly answers the many questions asked of the Department, and which have caused perplexing hours of thought with many doctors.

The communication appears in full in the December issue of the *Southern Medical Journal* and should be read by every doctor in this country.

In a previous paper by the same writer, presented prior to the time that the United States entered the world struggle, as in the above referred to communication, Col. Noble said: "On

the medical profession rests a heavy responsibility, for with the medical profession rests the subject of medical preparedness."

This is a particularly impressive paragraph and pregnant with truth, and its meaning should sink deep into the heart of every doctor in America. What was a fact before we entered the struggle is more than a fact now, since we have joined forces with our Allies in a world war, and which will only be terminated by the success of our arms.

We have not a sufficient number of medical officers to care for the combatant and other forces now in training. With the new draft soon to be called and the possibility of the raising of an army of between five and ten million, as has been authoritatively foreshadowed, we would repeat "On the medical profession rests a heavy responsibility, for with the medical profession rests the subject of medical preparedness."

The responsibility of the medical profession of the United States and its importance in the successful outcome of the war cannot be too forcibly impressed upon every doctor who is mentally and physically fit and within the age limit, and they are urged to offer their services now.

That the Surgeon General should have an immense Corps of Medical Reserve Officers upon which to draw, enabling him to place the individual where he will be best fitted for the service is manifestly apparent. This will mean efficiency and by efficiency alone can the responsibility now resting upon the medical profession of this country be lessened.

Apply at once for a commission in the Medical Reserve Corps and thus relieve the responsibility which you owe to your country, your profession and yourself.

RACIAL DEGENERACY.

No greater charge can be brought against the present organization of society than the fact that only in exceptional instances is the advent of new children in the family desired. Such an attitude in the great majority of the people must necessarily indicate that something is radically wrong in a system that produces a state so utterly opposed to the strongest of instinctive desires upon which depends the future welfare of the race. Not only must we consider the effect on the future condition of the race but it is self evident that where social and economic conditions tend to bring about

such a conflict with the instinctive desire for children the result is that the happiness and well being of the individual becomes a mere matter of miserable compromise between contending desires.

The charge is absolutely true. While statistics and other data are not available in every community, still sufficient investigation has been made, of a representative sort, to convince even the most superficial thinker that something should be done to remedy this state of affairs.

Perhaps the most illuminating facts on this subject are those reported by Spivy in the *Journal of the Missouri State Medical Association*. He finds a records of 250 abortions in two and a half years at the St. Louis City Hospital. This is a proportion of 1 to 3 of the pregnant cases at that institution. Of these abortions 33 per cent. were confessedly criminal. As he points out, a great percentage of these abortions occurred in married women. While his series is rather small yet they are not taken from any one particular class of patients and may be considered as fairly representative. A very small percentage were negro women—two of the series.

"It, therefore can not be too strongly emphasized that it is the married women and especially the white married women with large families as Rupp has shown, who furnish the greatest problem in the sociological question."

Bleichroeder, in a study of 1,000 hospital cases in Berlin has shown that the young married women of to-day abort about three times as frequently as the women of a generation ago.

As hospital records will quickly show, the practice of abortion is the final and most desperate resort in preventing a burdensome increase in the size of the family. A study of the birth rate throws a more direct light on the subject and corroborates the conclusion that the raising of children has become tragically objectionable to all classes.

Webb in a study of the birth rate in England, found that even when the differences in the proportion of married women of reproductive age was considered, there was a marked falling off in the birth rate between the years, 1886 and 1904. It is a familiar fact that this decrease can not be accounted for amongst the poorer classes of society as it is in these classes that we find the largest families in spite of the vicissitudes of poverty. To determine more accurately to what degree the thriftier and more prudent classes of society were responsible for this falling off, an investigation was made in the records

of the Heart of Oak Friendly Society. This is an English benefit society composed of artisans, meehanics, and the smaller merchants. No one is admitted whose income falls below the standard of these classes. It was the only society at that time paying a benefit for confinement. Hence, an accurate record could be obtained of the number of confinements occurring among the members. The society had a large membership so the figures may be taken as a reliable index to the actual conditions among this type. The analysis of these records shows that after making due allowance for differences in proportion of married to unmarried members and to differences in the marriage age, there was found to be a decrease in the claims of lying-in benefits of 46 per cent. between the years 1881 and 1904. The society membership comprises a million and a quarter persons.

It having been established beyond a reasonable doubt that this class was largely responsible for the decline in the birth-rate, an attempt was made to ascertain what causes were operating to produce this condition. Six hundred and thirty-four letter forms were sent out to which 302 replies were returned. These letters were sent to all parts of England and to every section of the middle class. Two hundred and thirty-six families confessed that the number of children was voluntarily limited while fifty-seven reported no such limitation. Among the unlimited families thirteen were childless so that no necessity arose for limitation. Causes for limitation were given in order of frequency, poverty, sexual ill-health, and general ill-health of parents. A fact worth noting is that limitation occurred most frequently after the second child was born. Losses due to death and sterility make it necessary that there should be at least three off-spring to each married pair if the strain is to be perpetuated.

A similar study carried out in this country among the alumni of Harvard shows even a more marked falling off in the number of off-spring.

We have mentioned only a few of the leading facts touching this subject. They are sufficient to show that it is possible in a large community like London for the total birth rate to decline due to voluntary limitation of the number of off-spring in a minority of the people and that this decline occurs in spite of the large families of the more ignorant and irresponsible classes. It means that individual success is attained only at the cost of future generations and that the best types sacrifice their desires for children and

as a consequence are far less fertile than the lower classes of society.

It is equally obvious that it is incumbent upon us as a profession to support every means by which married people may be encouraged to have families of at least five children and, on the other hand, discourage from producing oppressively large families. The liberal endowment of motherhood either by the State or by compulsory insurance, and the teaching of wholesome ideals are steps in attaining these ends and will incidentally do more than anything else to lower infant mortality.

ANNUAL MEETING.

As announced in our last issue our Annual Meeting will be held in Battle Creek on May 7, 8 and 9th. The Council and House of Delegates will convene on the evening of May 7th.

The General Session will convene at 9:00 A. M. on May 8th. In addition to the customary addresses of welcome and the President's Annual Address it is planned to have two or three speakers of national renown address the members assembled.

The afternoon of the 8th will be devoted to Section Meetings. For the evening of the 8th plans are being formulated for a general meeting which will be addressed by officers who have seen active fighting service and who will give us a word picture of conditions at the front. We believe that such a program will provide a profitable and entertaining evening for all in attendance.

The third day, May 9th, will be spent at Camp Custer as the guests of Lt. Col. Bartlett, Division Surgeon. It is planned to assemble at Camp Custer at 9:00 A. M. and a programme of lectures, drills, exhibitions, clinics, paper work, inspections, etc., will consume the members time well on into the afternoon. It will also be perceived that it will be a day filled with intensely instructive work and each will gain an intimate insight of army medical methods and practices.

We feel that this general outline of the program will create the desire for every member to attend. Plan now to be at this meeting which promises to be fraught with numerous interesting, instructive features. The complete program will be published in our April issue.

We suggest that you make your hotel reservations early. Should you fail to secure quarters then write to Dr. R. C. Stone Battle Creek, Chairman of Committee on Hotels, who

will secure reservations for you in a private home.

The April issue will contain a questionnaire which we want every member to fill out and return promptly.

It is sure going to be some meeting. Will you be there?

BATTLE CREEK COMMITTEES.

Calhoun County Society has appointed the following committees for our annual meeting:

GENERAL ARRANGEMENTS.

Dr. B. N. Colver, Chairman.

Dr. A. F. Kingsley, (Chairman on Publicity)

Dr. R. C. Stone, (Chairman Hotel Arrangements).

Dr. H. R. Allen, (Chairman of the Committee on Exhibits).

Dr. E. L. Eggleston, (Chairman of Reception Committee).

Dr. R. D. Sleight, (Chairman of Entertainment Committee).

Dr. C. S. Gorsline, (Chairman of Finance Committee).

HOTEL ACCOMMODATIONS.

Dr. R. C. Stone (Chairman). Dr. W. S. Shipp, Dr. J. A. Elliott, Dr. R. D. Sleight.

PUBLICITY.

Dr. A. F. Kingsley (Chairman). Dr. J. G. Gage, Dr. L. E. Stegman.

EXHIBITS.

Dr. H. R. Allen (Chairman, Dr. A. F. Kingsley.

FINANCE.

Dr. C. S. Gorsline (Chairman), Dr. R. D. Sleight, Dr. R. V. Gallagher.

ENTERTAINMENT.

Dr. R. D. Sleight (Chairman), Dr. J. A. Elliott, Dr. A. S. Kimball, Dr. R. C. Stone.

RECEPTION.

Dr. E. L. Eggleston (Chairman). Dr. J. G. Gage, Dr. J. W. Gething, Dr. W. L. Godfrey, Dr. J. S. Pritchard, Dr. Estella Norman.

Editorial Comments

Have you made your hotel reservations for our annual meeting to be held in Battle Creek, May 7, 8 and 9?

Dues—are yours paid for the current year? May we urge that you give this your immediate attention?

We hope to be able to impart in considerable detail the program for our annual meeting in our next issue. The last day will be spent at Camp Custer. The visit will not alone be one of sight seeing. Various demonstrations will be made, methods described, cases exhibited and drills executed. A large amount of time is being devoted toward causing that day to stand out in the history of our organization. You cannot afford to miss it. It will be a day of pleasure and profit.

This issue contains the minutes of the mid-winter session of the Council and the reports of officers. They merit your study and reflection.

We haven't been able to learn just who is fostering the scheme to amalgamate the several state boards with the Board of Health. We do invite a discussion of the question in order that we may be fully informed when the matter is presented to the legislature—if it ever is.

While talking of rumors we also mention that it is intimated that Detroit is considering the appointment of a Commissioner of Health which office will carry an annual salary of \$10,000.

If your *Journal* is delayed please be patient. Five days of business standstill. Monday holidays, fuel famine, limitation of electric power for motors, delayed mails, delayed copy, shortage in paper, limited supply of printing ink are a few factors that occasion delay and incidentally entail extra labor and planning in the printing of *The Journal*.

The annual meeting of County Secretaries has always been held in connection with our annual meeting. We are in doubt whether it is advisable to hold such a meeting this year. To solve the proposition we are presenting the question to the County Secretaries: "Do you

want a meeting this year?" May we have an expression of your wishes? Please express your views promptly.

Just once more in this issue—please remit your 1918 dues to your County Secretary *now*. We dislike a delinquent list.

Do not forget to make your reservations for the annual meeting. Indications point to a large attendance with hotel accommodations completely occupied.

The sectional meeting will occupy but one afternoon of the session. Papers will necessarily be limited. We assure you that Section officers will provide programs with live topics and snappy discussions.

We anticipate the presence of a number of guests from surrounding states. The day at Camp Custer will be one that will be long remembered. Wisconsin, Illinois, Indiana and Ohio doctors have already manifested interest. Of course they are welcome but we would appreciate information as to their attendance in order that we may make arrangements accordingly.

We note that a former professor of physiology at the University of Berlin has been condemned to prison and his property confiscated. This punishment was inflicted because of his authorship of a book in which he pointed out the warping of the conceptions of German scientists and military men in the course of hostilities. Exception was particularly taken to the following:

"The military person who is numbered among the most prominent, but whose name I shall not mention, enquired of me whether it might not be possible to fix shells with cholera germs or plague bacilli so that the shells could be sent over to the enemy."

"As I replied to him that I did not think it would do to use procedures so lacking in humanity, he answered me in tones tinged with contempt, 'Humanity is not to be considered in this war and Germany has a right to do everything she pleases.'"

Further comment is deleted for ordinary language does not permit the expressions of forceful condemnation of such baseness.

Doctor, your dues unpaid by April 1st causes your suspension. The dues must be paid to your County Secretary so that he may remit to the State Secretary before the books are closed on March 31st. Do not fail to give this your prompt attention.

We are compelled to announce to our contributors that in the future no reprint orders will be accepted or filled unless remittance accompanies the order.

We are compelled to take this stand because we have in several instances favored members by filling their order for reprints and subsequently have been unable to collect for the same. So far during the past year our loss due to inability to collect has been over \$200.

We regret the failure on the part of certain contributors to pay for reprints which they ordered necessitates the establishment of this rule and its rigid observance.

The American Association of Industrial Physicians and Surgeons offers a prize of \$100 for the best thesis on any subject related to Industrial medicine and Surgery by any undergraduate medical student of the United States. The thesis must not contain more than 5,000 words.

All theses must be in the hands of the Secretary of the Association by May 1, 1918.

HARRY E. MOCK, M.D., Secretary,
122 S. Michigan Avenue.
Chicago, Illinois.

Solicitors are canvassing the profession of the State for \$100.00 Life Membership for the erection of a home for superannuated or disabled physicians. The proposition is to erect an institution similar to the Printers' Home in Denver. The proposition emanates from three physicians of Springfield, Illinois, and to locate the home in that city.

To gain insight upon the proposition we wrote to the Secretary of the A.M.A. for information and received the following letter in reply:

Chicago, Feb. 12, 1918.

Dr. F. C. Warnshuis, Secretary,
Michigan State Medical Society,
Grand Rapids, Mich.

My dear Dr. Warnshuis:

On receipt of your telegram of the 8th, I sent you the following reply: "Wrote Welsh concerning Physicians' Home. See him." In reply to a similar inquiry received some time ago from Dr. D. Emmett Welsh, of Grand Rapids, we wrote him as follows:

"As I understand it, three physicians in Spring-

field, Illinois, have undertaken the establishment of a National Physicians' Home Association. While these men are considered in the community as being competent physicians and honorable men, so far as I have been able to learn, the assets of the association are the fees which have been paid in by those who have taken memberships. The scheme is being promoted by two men who undertake to meet the cost of the promotion and are paid 24 per cent. of the assets which they secure. From this, it appears that the organization is keenly on paper, so far, and apparently should be regarded as philanthropic rather than as an insurance venture. The organizers seem to have in mind an effort to parallel the Printers' Home at Colorado Springs, Colo.

This is practically all we have been able to learn concerning the proposed home. I trust, however, that it will give you the information you desire."

Very truly yours,

AUG. R. CRAIG, Secretary.

Personally we cannot see the wisdom of the movement or the method employed to foster the plan. It seems that the wisest method would have been to secure first the endorsement of the local medical society, then the state society and the American Medical Association.

Then there would have been assured a democratic administration of the home. We are also in doubt as to the need for such an institution. The solicitor was unable to furnish any estimate as to how many would avail themselves of the comforts of such a home.

The plan calls for a 1,000 men in Michigan to contribute \$100 each or a total of \$100,000. The promoters are to receive thirty per cent. or \$30,000 for their efforts. We would be willing to assume the task and in six months put it across—a neat sum for the effort.

Think twice before you give \$30.00 for the privilege of paying \$70.00 for a life membership in such a movement.

Stop! There will be found several new advertisements in this issue. The securance of a contract is dependent on the business these ads bring to the advertiser. Some of the ads we are running are keyed and record is being kept of the results that are being obtained. The renewal of these contracts also are being held in obedience. The reader and member is urged to patronize these advertisers in order that we may retain this revenue. Send them your orders, or, at least write them that you have read their advertisement.

Correspondence

Manistee, Feb. 19, 1918.

F. C. Warnshuis, M.D.

Editor of The Journal.

On January 31st, 1918, Dr. Albert S. Payne, one of our most beloved physicians, died of heart failure. His death, during the prime of his life, came as a great shock to everyone and he will be missed not only by his intimate friends, but by all in this community.

During the past few months, Dr. Payne's professional duties had been sapping his strength and, though in apparent good health at the time of his death, he was by no means robust. There was very little warning that his useful life would terminate so suddenly.

Dr. Payne was born in Port Clinton, Ohio, February 29, 1868. He studied medicine at the University of Michigan and after being graduated, set up in practice at East Lake, Michigan, where he remained for a number of years before coming to Manistee. He has been in practice in this city for twenty-five years, during which time he has endeared himself to all, not only by his professional ability but by the personal interest he took in every patient.

The sweet and gentle character of Dr. Payne and his modesty and purity of thought were marked characteristics, and his unfailing gentlemanly demeanor as a practitioner and friend served to enhance the strength of the love with which thousands in this city and county regarded him.

Dr. Payne was a Fellow of the American Medical Association, a member of the Michigan State Medical Society and a member of the Manistee County Medical Society of which he had been president a number of times.

HOMER A. RAMSDELL, Secretary,
Manistee County Medical Society.

Washington, Feb. 27, 1918.

The Council of National Defense today authorized the following statement:

For the purpose of completing the mobilization of the entire medical and surgical resources of the country, the Council of National Defense has authorized and directed the organization of a "Volunteer Medical Service Corps," which is aimed to enlist in the general war-winning program all reputable physicians and surgeons who are not eligible to membership in the Medical Officers' Reserve Corps.

It has been recognized always that the medical profession is made up of men whose patriotism is unquestioned and who are eager to serve their country in every way. Slight physical infirmities or the fact that one is beyond the age limit, fifty-five years, or the fact that one is needed for essential public or institutional service, while precluding active work in camp or fields or hospital in the war zone, should not prevent these patriotic physicians from close relation with governmental needs at this time.

It was in Philadelphia that the idea of such an organization was first put forward, Dr. William Duffield Robinson having initiated the movement

resulting in the formation last summer of the Senior Military Medical Association with Dr. W. W. Keen as president—a society which now has 271 members.

Through the Committee on States' Activities of the General Medical Board the matter of forming such a nation-wide organization was taken up last October in Chicago at a meeting attended by delegates from forty-six states and the District of Columbia. The Committee, of which Dr. Edward Martin and Dr. John D. McLean—both Philadelphians—are respectively chairman and secretary, unanimously endorsed the project. A smaller committee, with Dr. Edward P. Davis, of Philadelphia as chairman, was appointed to draft conditions of membership, the General Medical Board unanimously endorsed the Committee's report, the Executive Committee—including Surgeons General Gorgas of the Army, Braisted of the Navy, and Blue of the Public Health Service—heartily approved and passed it to the Council of National Defense for final action, and the machinery of the new body has been started by the sending of a letter to the State and County Committees urging interest and the enrollment of eligible physicians.

It is intended that this new Corps shall be an instrument able directly to meet such civil and military needs as are not already provided for. The General Medical Boards holds it as axiomatic that the health of the people at home must be maintained as efficiently as in times of peace. The medical service in hospitals, medical colleges and laboratories must be up to standard; the demands incident to examination of drafted soldiers, including the reclamation of men rejected because of comparatively slight physical defects; the need of conserving the health of the families and dependents of enlisted men and the preservation of sanitary conditions—all these needs must be fully met in time of war as in time of peace. They must be met in spite of the great and unusual depletion of medical talent due to the demands of field and hospital service.

In fact, and in view of the prospective losses in men with which every community is confronted, the General Medical Board believes that the needs at home should be even better met now than ever. The carrying of this double burden will fall heavily upon the physicians, but the medical fraternity is confident that it will acquit itself fully in this regard, its members accepting the tremendous responsibility in the highest spirit of patriotism. It will mean, doubtless, that much service must be gratuitous, but the medical men can be relied upon to do their share of giving freely, and it is certain that inability to pay a fee will never deny needy persons the attention required.

It is proposed that the services rendered by the Volunteer Medical Service Corps shall be in response to a request from the Surgeon General of the Army, the Surgeon General of the Navy, the Surgeon General of the Public Health Service, or other duly authorized departments or associations, the general administration of the Corps to be vested in a Central Governing Board, which is to be a committee of the General Medical Board of the Council of National Defense. The State Committee of the Medical Section of the Council of National Defense constitutes the Governing Board in each State.

Conditions of membership are not onerous and are such as any qualified practitioner can readily meet. It is proposed that physicians intending to join shall apply by letter to the Secretary of the Central Governing Board, who will send the applicant a printed form, the filling out of which will permit ready classification according to training and experience. The name and data of applicants will be submitted to an Executive Committee of the State Governing Board, and the final acceptance to membership will be by the national governing body. An appropriate button or badge is to be adopted as official insignia.

The General Medical Board of the Council of National Defense is confident that there will be ready response from the physicians of the country. The Executive Committee of the General Medical Board comprises: Dr. Franklin Martin, Chairman; Dr. F. F. Simpson, Vice-Chairman; Dr. William F. Snow, Secretary; Surgeon General Gorgas, U. S. A.; Surgeon General Braisted, U. S. Navy; Surgeon General Rupert Blue, Public Health Service; Dr. Cary T. Grayson; Dr. Charles H. Mayo; Dr. Victor C. Vaughan; Dr. William H. Welch.

Deaths

We have received notice of the death of Dr. Herbert W. Catlin of Grand Rapids, Dr. R. F. Stratton of St. Joseph, Dr. T. J. Wilson of Greenville, Dr. M. A. Plummer of Holly, Dr. J. W. Fay of Detroit and Dr. E. B. Tibbals of Port Huron.

State News Notes

A petition to include an appropriation of \$30,000 in its supplemental estimates will be presented to the board of education, Detroit, by the Detroit College of Medicine and Surgery. The appropriation is to make possible in the college extension work a course equivalent to two years in medicine.

The appropriation, Dr. Biddle holds, is in the nature of a war measure, as it would assist in relieving the shortage of physicians. The course would be held in the Detroit College of Medicine and Surgery buildings, but would be under the direction of the board of education. It would consist principally of the study of anatomy, chemistry, physiology, materia medica and pharmacology.

Because of the war, the \$1,000,000 endowment was abandoned, but the annual deficit of the college—\$20,000 to \$25,000—goes on steadily. Dr. Biddle explained. The faculty now is appealing to the authorities to place the institution, as far as possible, under the city's educational system. Dr. Biddle says:

"For all practical purposes, the Detroit College of Medicine and Surgery is a city institution, in the hands of the board of trustees, composed of some of our own most prominent citizens. Services of teachers are given without thought of financial remuneration.

"The appeal also is made in justice to medical students now enrolled. All medical students of draft age and physically fit are drafted into the national army, but are entered in the enlisted medical reserve and directed to continue their course of study.

"Young men have been assigned to this school and are entitled to the aid of their community. It would be embarrassing and a hardship to them, embarrassing to the war department and a distinct loss to the prestige and the well-earned loyalty of Detroit should a lack of financial assistance close the doors of the institution.

"The Detroit College of Medicine and Surgery is in class A, the highest grade recognized by the American Medical Association. I feel assured that if the board of education will permit the faculty to appeal to the city through its budget, the cause will be found just and worthy."

News has been received of the official assignment of Captain H. S. Bartholomew, M. R. C. as post surgeon of Brooks Field, a new aviation field recently opened near San Antonio, which is to constitute a field for advanced flying, a sort of post graduate school for aviators who will become instructors.

Captain Bartholomew, formerly internist of Lansing, went into active service in September and went directly to Indianapolis for military training at Fort Benjamin Harrison. From there he was assigned to the aviation section, signal corps, Kelly Field, San Antonio, Texas. Since reaching San Antonio, the Captain has been in charge of the quarantine camp, a section where recruits are received and isolated for a period of two weeks or longer if contagious diseases appear. Later, he was assigned to duties of epidermologist. Within the last few days, he was made post surgeon of the new field.

At the annual meeting of Providence Hospital,

Detroit, the following officers were elected: President, Dr. R. E. Mercer; Vice-President, Dr. D. H. O'Donne'l; Secretary-Treasurer, Dr. George C. Chene. The executive committee chosen consists of Dr. Mercer, Dr. O'Donnell, Dr. Chene, Dr. James E. Davis and Dr. Walter E. Welz. During 1917 there were 2,634 surgical cases in the hospital; 1,076 obstetrical cases; 800 pediatrics and 881 medical, etc., as compared with 2,844 surgical, 845 obstetrical and 1,069 medical and pediatrics during 1916. During 1917 there were 3,553 operations in the hospital, a large increase over the previous year.

We are unable to publish news items unless our members supply us with information. Please send us clippings from your vicinity.

Miss Catharine Ostrander has been engaged by the State Board of Health as a Social Worker and Director.

Dr. C. J. Emis of Sault Ste. Marie is recovering from an operation and writes that he expects to be present at our next annual meeting.

Dr. Wm. Mudge has become affiliated with the Ishpeming Hospital, succeeding Dr. Braden, who has been ordered on duty.

Dr. Bertha Stuart of Ann Arbor, formerly director of the Women's Department of the University, has gone over seas on Red Cross work.

Dr. Fred B. Jones has been appointed superintendent of the Detroit Receiving Hospital, succeeding Dr. Dretzka, who was ordered on duty.

Dr. R. G. Marriner has been elected Health Officer of Menominee.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

GRATIOT-ISABELLA-CLARE COUNTY

The Gratiot-Isabella-Clare County Medical Society met at Brainerd Hospital in Alma, Jan. 24. Meeting was called to order by Pres. Hall. After the minutes of the previous meeting were read and approved, Dr. W. E. Barston read a short paper on the "Use of the X-ray in General Practice." This was discussed by nearly every one present. Dr. Pankhurst teleph. he missed the train, but would come on the next train. As most of the visitors had to wait for the evening train anyway the majority

decided to wait, and filled up this time reporting, or discussing interesting cases.

Dr. C. T. Pankhurst then read a very interesting paper on "Oral Sepsis." The discussion of this paper was postponed until next meeting in order to allow the doctors to catch their train. Meeting adjourned.

E. M. HIGHFIELD, Secretary.

INGHAM COUNTY

The Ingham County Medical Society had a meet-

ing on February 1st in the Chamber of Commerce at Lansing.

Following is the program:

Case Report, "Malignant Papilloma of the Bladder." Dr. R. H. Crissey, Lansing.

Case Report, "Diabetes Mellitus Complicating Pregnancy." Dr. Samuel Osborn, Lansing.

"Diseases of the Stomach and Duodenum." Illustrated by lantern slides. Dr. Elmer L. Eggleston of Battle Creek.

Doctor Crissey made a plea for more frequent use of the cystoscope and offered the present day classification of benign and malignant tumors of the bladder.

Doctor Osborn briefly reviewed the literature on his subject and showed the grave outlook for the pregnant diabetic.

The excellent illustrated talk by Dr. Eggleston covered more than forty cases of benign and malignant diseases of the stomach and duodenum.

E. I. CARR, Secretary.

A special meeting of the Ingham County Medical Society was held in the Secretary's office, 128 West Allegan Street, Lansing, February 16th at 1:30 P. M. to enact resolutions on account of the death of our former president and esteemed fellow member, Dr. A. D. Hagadorn.

The resolutions follow:

Whereas, the All-Wise Providence has seen fit to take from us our esteemed brother and fellow practitioner, Doctor A. D. Hagadorn.

Be It Resolved, That we, as members of the Ingham County Medical Society, feel that in his death this community has lost a good citizen and a valuable and faithful servant; that his professional life has been an inspiration to us all; that he has been an honor to the medical profession and a true friend.

Be It Further Resolved, That this resolution be spread on the minutes of the society and a copy sent to the family.

Samuel Osborn,

H. A. Haze,

Oscar H. Bruegel,

Louis W. Toles,

Committee.

The society proceeded in a body to the funeral at the family home, 427 Scymour Street at 2 P. M.

Dr. Hagadorn was 75 years old and had been in active practice in Lansing for the past thirty-six years. Both profession and laity regarded him of great value to the community both as a doctor and a citizen. His death was sudden occurring at his winter home in Florida.

E. I. CARR, Secretary.

ST. CLAIR COUNTY

The St. Clair County Medical Society held its regular meeting in the Harrington Hotel Thursday evening, February 14, 1918.

After dinner the meeting was called to order by the President, Dr. Wheeler.

Minutes of previous meeting read and approved.

Dr. E. P. Tibbals of Port Huron died at his residence Thursday afternoon.

Dr. Kendrick of Port Huron read a very interesting paper on "Orthadontia as a Propolactic Treatment."

Discussion opened by Dr. Attridge.

Seventeen members of the Society were present.

W. W. RYERSON, Secretary.

Book Reviews

MILITARY ORTHOPARDIC SURGERY—MEDICAL WAR MANUAL. Prepared by the Orthopardic Council of the Surgeon General's Office. 12 mo., waterproof, 272 pages. Price \$1.50. Lea & Febiger, Philadelphia.

The experiences of the orthopardic surgeons in the services of our allies is the basis of this manual. It has been made thoroughly practical for American surgeons. It is concise in form. The excellent illustrations enhances its value. The contents is of equal interest to the man in the service and he who continues in civil practice.

We welcome this method of dissemination of reliable information and commend heartily the production of such publications for they stimulate desire for further knowledge, provide reliable practical information and enable one to grasp the progress made in the subjects discussed. Your money will be well invested if you acquire this manual.

OBSTETRICS. A Text Book for use of Students and Practitioners. J. Whitridge Williams, John Hopkins. Fourth Edition, enlarged, revised. D. Appleton & Company.

A new edition of such a well and favorably known work, widely used, hardly calls for any comment except that of congratulation and welcome. William's style is particularly adapted to teaching purposes as his frequent references to the literature on the subject and names of the leaders in the development of obstetrical theories and methods as well as his strict avoidance of dogmatic assertions and personal prejudices, all together, give the student a broad historical view of subject and help to inculcate the unbiased rational attitude that makes for efficient obstetrical service.

Miscellany

ASCENDENCY OF THE AMPOULE.

As evidence of the favor with which the medical profession has come to regard the glaseptic ampoule, it is worthy of note that Parke, Davis & Co. now supply in this form more than eighty sterilized solutions for hypodermic use. The fact is significant

when it is remembered that the "ready-to-use" solution is distinctly a modern institution, having its introduction in this country less than ten years ago.

Solutions in ampoules, it is obvious, have several advantages over those prepared in the ordinary way. They are ready for immediate use, any time, anywhere, there being no necessity to wait until water can be sterilized and cooled. Accuracy of dose is insured, each ampoule containing a definite quantity of medicament. The solutions are aseptic; they are permanent.

Parke, Davis & Co., publish an "Ampoules" brochure, a valuable little book of seventy pages, giving a list of their sterilized solutions, with therapeutic suggestions, dosage, descriptions of packages, prices, etc. The work contains a useful therapeutic index and an informing chapter on hypodermic medication in general. Physicians and surgeons are advised to send to the Detroit laboratories of Parke, Davis & Co. for a copy of the book, requests for which are invited.

Secretin-Beveridge and the U. S. Patent Law.—In 1916, A. J. Carlson and his co-workers demonstrated that commercial secretin preparations contained no secretin, and that secretin administered by mouth or even into the intestine was inert. Yet a U. S. patent was subsequently issued to James Wallace Beveridge, for a process of preparing secretin preparations which would contain secretin when they reached the consumer, and in a form resisting destruction in its passage through the stomach. At the request of the Council on Pharmacy and Chemistry, A. J. Carlson and his associates studied the stability of the secretin made according to the Beveridge patent. The investigation shows that the patient gives no process for the manufacture of commercially stable secretin preparations, nor any means for preventing the destruction of secretin by the gastric juice when administered orally (*Jour. A.M.A.*, Jan. 12, 1918, p. 115).

Need for Patent Law Revision.—The Council on Pharmacy and Chemistry publishes a report prepared by its Committee on patent law revision, which is an appeal for an amendment of the patent law which governs the issuance of patents on medicinal preparations, and more particularly for a revision on the procedure under which such patents are issued. The report points out that to increase our national efficiency, the government must protect and stimulate science, art and industry, and at the same time curb waste of the country's resources; and that, to this end, the patent office should encourage discoveries which go to increase national efficiency, and refuse patent protection when such protection is not in the

interest of national efficiency, conservation of energy and material resources. The report presents a considerable number of specific instances which demonstrate that patent protection has been given where it was not deserved and not in the interest of the public. The report concludes with a reference to the investigation of a patent granted for a preparation of secretin, apparently without any attempt to confirm the highly improbable claims of the patent applicant (*Jour. A.M.A.*, Jan. 12, 1918, p. 118).

Cactina Pillets.—According to the manufacturer of cactina pillets (The Sultan Drug Co.), "cactina" is invaluable in all functional cardiac disorders such as tachycardia, palpitation, arrhythmia, and whenever the heart's action needs regulating or support." The manufacturer gives no information as to the mode of action of "cactina," but states that it is totally unlike that of digitalis. An examination of the literature indicates that *Cactus grandiflorus* is therapeutically inert, and no one except Mr. Sultan of the Sultan Drug Company claims to have isolated an active principle of it. The Council on Pharmacy and Chemistry examined the literature relating to cactus and certain proprietary preparations, including Cactina Pillets, alleged to be made from cactus, and reported that the literature does not afford a single piece of careful, painstaking work which lends support to the claims made for Cactina Pillets. Since then, Hatcher and Bailey examined genuine *Cactus grandiflorus*, and also found that the drug was pharmacologically inert. (*Jour. A.M.A.*, Jan. 19, 1918, p. 185).

Surgodine.—The A. M. A. Chemical Laboratory having found Surgodine (Sharp and Dohme) to contain 2.51 Gm. free iodine (instead of 2.25 per cent. as claimed) and 1.78 Gm. combined iodine (probably chiefly hydrogen iodide), the Council on Pharmacy and Chemistry reports that it is essentially similar to the official tincture of iodine except that it is considerably weaker and, instead of potassium iodide, it presumably contains hydrogen iodide and probably ethyl iodide to render the iodine water-soluble. Its composition, however, is secret. The Council held Surgodine inadmissible to New and Nonofficial Remedies because its composition is secret; because the therapeutic claims made for it are exaggerated and unwarranted, and because it is an unessential modification of the official tincture of iodine. Surgodine is a good illustration of the economic waste inseparable from most proprietary medicines. While the free-iodine strength of Surgodine is only about one-third that of the official tincture, its price is between two and three times as high (*Jour. A.M.A.*, Jan. 26, 1918, p. 257).

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVII

GRAND RAPIDS, MICHIGAN, APRIL, 1918

No. 4

Original Articles

DERMATOLOGICAL MALINGERING.*

H. R. VARNEY, M.D.

DETROIT, MICH.

Of the many types of malingering, intentional and unintentional, which enter all phases of human life in varying degrees, probably there is none more fascinating from the standpoint of psychology and medicine than that known as Dermatological Malingering; Fictitious Dermatitis, Cutaneous Malingering, and Dermatitis Artificata being other names for this disease. It is fascinating first of all because of the difficulty in establishing beyond all question that the condition is self-induced. This often entails a prolonged, yet interesting, bit of detective work. Because the work of the patient has been so carefully, secretly, and successfully carried out, much of the physician's time is consumed in excluding all dermatological conditions, which the lesions often resemble, in order that he may be positive of his opinion when all the evidence is in; and he must present his case clearly or he is sure to stir up real trouble with both patient and relatives.

The dermatologist, in view of the fact that the skin, because of its accessibility and the unlikelihood of a fatal outcome, is chosen most often by the malinger to demonstrate his mental state upon, comes in contact with this class almost daily. In spite of this, self-inflicted skin conditions are not always easily recognized by the trained dermatologist. The lesions may or may not resemble other dermatological conditions, and they are usually developed to a certain stage before the physician observes them. There is no preliminary stage in the development of the individual lesion, as is often noted in most of the well recognized dermatoses.

There is not the macula that develops to a vesical, papuli, pustule, or a bleb. The lesions usually develop at night upon areas that are less sensitive and most conveniently reached by the patient. If the patient be right-handed, the lesions are likely to be produced upon the left side of the body, especially upon the left arm; the opposite is true if the patient be left-handed. The lesions are most often irregular in outline, though this depends upon the agents used, and they often present a mechanical appearance. Excoriation by friction with an instrument or other agent is the most common lesion produced. The dermatological condition presents periodical occurrences, and always upon new areas of skin. The lesions made so closely resemble some of the common dermatoses, as will be shown by two of the cases reported, that more than sixty physicians who observed these cases once or oftener failed to make a correct diagnosis. While the patient will submit to any and all forms of treatment and method of diagnosis, he never assists the physician in seeing the development of the lesion. Patients, though requested to report developing lesions to the nurse in order that she may notify the interne and the interne the physician in charge, never report. The removal of tissue and even the amputation of finger or arm have been consented to by the patient before he will admit to the physician that the condition is self-induced. In some instances it is quite impossible to make a diagnosis without obtaining from the patient the admission of self-infliction. This can sometimes be elicited if the patient is confronted with strong evidence that such is the case. If one can determine the motive of this act and confront the patient with the fact that one is obliged to expose him publicly, a confession is usually forthcoming. The exposure of the patient, either secretly or publicly, is always

*Read before the Detroit Academy of Medicine, Feb. 12, 1918

followed by a cessation of new lesions. The private exposure of the patient excluding all relatives or interested friends, prevents as much as possible the severe shock of the exposure upon this neurotic, hysterical class of persons. If you acquaint the mother or other members of the family of the true nature of the dermatosis at the same time you accuse the patient, troubles are multiplied and you lose the patient at once, and are considered an enemy of the family; if you are wrong in your diagnosis, you will suffer trouble and embarrassment.

The detective methods used to trap these patients must be ingenious to meet their own ingenious methods in producing the condition. My method of confirming my suspicions of, beyond a doubt, two of the most clever, skillful malingerers was by first taking sections of skin from certain areas of the body for instance the forearm, by deluding the patient with the idea that this was removed for microscopic study, dressing the area where the tissue was removed, covering the whole forearm, and then sealing this dressing with plaster paris bandage. A recurrence of skin conditions appeared on the selected areas of the body, but upon removal of my sealed dressings no lesions were found under it, and when I confronted the patients with my evidence and requested the instrument by which they were producing these interesting lesions, they presented a pair of curved manicure scissors, and escaping from the hospital that night, fled to Canada.

If chemicals are used, acid is the most common. Litmus paper applied to the serum of the lesion will often convey acid coloring when it is impossible to detect the odor of the acid used. Often these patients make use of more than one agent in producing lesions and often of a great variety, depending upon the mental state of the patient. A bleb, for instance, is often produced by heat from the ordinary radiator. Various drugs, in addition to the acids, dyes, sand paper, and all sorts of instruments by which an excoriation can be made, are used.

The true cause of the unusual dermatoses being Sherlocked, another interesting phase of the study of these cases presents itself, namely, the motive of the patient in producing such a condition.

The most common motive which actuates the

patient is that of escaping work or distasteful duties, or exciting sympathetic interest for the purpose of receiving charity. These conditions occur most commonly in the weaker mentalities of young hysterical females. They are also frequently noted in the criminal class and in military service, especially among those of the latter class who are periodically under fire. A certain percentage of the men who know that they are to go to the front or over the top in twenty-four hours present to the medical service a most interesting and varied group of malingerer conditions. Even actual disease of venereal nature is intentionally transferred to the healthy for the sole purpose of obtaining relief from actual service. It is difficult for a soldier to produce artificial temperature, but it is not difficult to produce upon his skin many varied types of eruptions which are self-inflicted. The malingering usually originates in a most trifling way by some act for the sole object of eliciting sympathy from one or more members of the immediate family. If sympathy is not extended, the malingering grows upon the patient until there is produced, in the eyes of the relatives, alarming symptoms.

No treatment, no matter what the indications are, shows any effect upon the recurrent attacks. Treatment to the existing lesions, however, shows benefit, as in any or all dermatological conditions. The following cases are selected from the author's record and are illustrative of various forms of Dermatological Malingering:

CASE I. Mrs. M., age 41, the wife of an attorney and childless, was extremely neurotic, with a jealous disposition and very peppery temper coupled with a great horror of losing her beauty and growing old. Consequently she spent much time on her personal appearance and extravagant dress, was selfish, and had few friends.

Mrs. M. had a most unusual dermatitis of the lower lip and chin which had persisted for several months when she came under my observation. There was complete excoriation of the lower lip extending upon the skin of the chin with marked swelling and weeping a bloody serum.

The patient's story, which the husband, interested relatives, and medical advisors thus far accepted, was as follows: While in the country a few months previous upon a visit to some relatives who lived on a farm, she had kissed a sheep and from that time had been infected with sheep ticks. The presence of these ticks caused the unusual and painful condi-

tion. This story, coupled with the most extraordinary localized dermatitis conveyed suspicion at once that the lesion was self-inflicted.

Hospital treatment and further study of this case revealed the following interesting facts: she was addicted to the use of both morphine and cocaine and in order to obtain these drugs she would burn the skin and mucous membrane from the lip with a curling iron. She applied the cocaine to the lip locally and administered the morphine hyperdermically.

In trapping this patient it was extremely difficult to obtain all her drugs. I prescribed medicated baths for the destruction of the ticks, and while in the bath all clothing and bedding was searched for drugs and for several baths she completely concealed her hyperdermic needle in her left arm pit. The skin condition cleared up promptly and institutional treatment cured the drug habit.

CASE II. Mrs. P., age 56, wife of a druggist, had one child. Her general health was very poor for years. She was anemic and neurotic and suffered from insomnia. Much of her married life was spent alone at home with no change of scene or diversion through holiday trips. Many drugs were brought home by the husband for the relief of her many physical discomforts.

Patient's story. She had suffered with severe pain in the skin of one or both sides of the face for three months. The skin developed large open sores over these areas and the pain, paroxysmal and excruciating, came at any and all times of the day and night. She described the pain as in the skin, never as in the jaw and her teeth were non-sensitive. Only temporary relief was obtained from codein.

The patient came in with several dressings over the head and cheeks and upon their removal presented severe superficial clean-out ulcers on both cheeks, some broken, others with dark, firm crusts. There were no other lesions on the body. The confidence of the patient was elicited through the conveyance of extreme interest in her unusual skin disease and especially in the liquid medicine that had given her relief from this pain, and she was frank to tell me that local applications would not relieve her without the assistance of several codein tablets. Upon request she gave me the liquid, which was a form of liniment, with which she was producing the ulcers, and I succeeded in cutting off her supply of codein. I selected as my assistant the only daughter, a college graduate, and upon laying my views before her and entreating her assistance, I was met with decided distrust and she left my office decidedly ruffled mentally. I requested the husband and daughter to go home and leave the patient with a friend and through her assistance I was able not only to heal the ulcers, but to prevent new ones. She remains well.

Cases III and IV are illustrative of the common

type who malinge to elicit sympathy from anyone who will extend it.

CASE III. Miss L., nurse, age 32, in general good health, was attendant in a nursing capacity in a sanitarium for nervous and mental diseases. She was not addicted to drugs so far as could be determined. She had suffered with recurrent ulcerative lesions of the left arm, chest, and both legs for one year. Although she had visited many hospital clinics and private physicians in Canada and the United States, she had not thus far received any treatment that had prevented the recurrence of the most unusual lesions. It seemed to give her particular pleasure when one or more physicians would examine the lesions and discuss them. As she was right-handed the drug was applied to the left arm, chest, and legs,



Case III. Old and new lesions produced by acid.

thus leaving the right arm unaffected. The new lesions were always fully developed when examined and were of a superficial burn of the escrotic, destructive type. The lesion was always deeper in the center, hard at the periphery and healed with the formation of a firm dark crust. The lesion conveyed at once a self-inflicted character and upon being confronted by this fact she was insulted and we could obtain no confession, nor would she tell the chemical she was using. Litmus paper applied to the newer lesion conveyed a weak acid reaction. She never returned to the hospital clinic after she was confronted by the evidence that she was producing the condition.

CASE IV. Miss B., age 16, whose mother had died when the patient was very young and who lived alone with her father, came under observation in hospital service. She complained of an itching, burning skin eruption of the face of several months duration. She also complained of mistreatment from her father and a male boarder. These complaints were gathered by officers of the law and criminal charges and warrants were issued. The court sentenced the male boarder to prison for a period of years and the father was acquitted.

The skin condition resembled most closely a dermatitis due to external irritation. Occupational causes were excluded without apparent effect, also the varied treatment given by different physicians.

I was unable to conclude from the character of the lesions that they were not self-inflicted. I, therefor, confronted her with the third degree examination. She denied the accusations, yet in a short time the condition completely disappeared with no recurrence.

the patient and her irresponsible mental state prevented the court from instigating criminal perjury charges against her.

Confronting this patient with her deceptive acts which were done primarily to elicit sympathy, not



Case IV. Excoriations produced by friction. Confined to the face.

In a few months I learned that she had manifested a further change of heart and had gone to the judge who sentenced the male roomer to prison and told him that she had testified falsely, whereupon the judge released the man from prison. The age of

only cleared up the unusual skin condition, but, no doubt, assisted in righting a great wrong she had done others.

CASE V. Miss C. T., age 18, in general good health with her mother and one sister one and one-

half years younger living. The patient was brought in for consultation and diagnosis by the family physician. She presented several open clean-cut, weeping, crusting lesions on the left arm and both

the lesion developed quickly at night with a burning sensation and that it had been recurring for six months. Upon examination the lesions presented no resemblance to any recognized dermatitis, but con-



Case V. Lesions on face and left arm, excoriations in character.

sides of the face. (The patient was right-handed.) The lesions varied in size and age. There was no inflammatory zone at the border of the lesion nor constitutional symptoms present. Patient stated that

veyed an artificial character at once. I asked the physician to step into another room whereupon I told him that the patient was producing the lesions. He was, to say the least, greatly startled and had some

difficulty in arriving at my conclusion. Upon asking him if the lesions were not plainly excoriations, he was convinced. I allowed him to expose this patient, although I predicted that he would not only raise a storm from the patient and mother, but perhaps lose the family as patients.

The motive in her malingering was to escape school and the embarrassment that had broken her spirit and made her lose interest in school. It had come about that the younger sister had not only



Case V.

overtaken her in her studies but was to go in advance of her at the beginning of the February semester. She set about to produce the lesions to elicit sympathy as soon as school was to open in the fall. At the Christmas vacation the lesions all healed and no new ones appeared. Then it was suggested that she return to school, whereupon she had this outbreak, that brought her to the city for consultation. A photograph and exposure effected the cure in her case and she had no more outbreaks.

CASE VI and VII. Miss P. A. and Miss D. C., age 16, were inmates of the reform school. Shortly after their entrance to the school they were reported to the school physician as having a skin disease. They were thought to have a contagious disease and were isolated in a hospital ward. Treatment



Case VI. Feigned eruption showing pear-shaped lesions produced by curved scissors.



Case VI. Extensive symmetrical condition produced by the comedo extractor shown in plate.

of different character was administered for scabies with no apparent improvement. After several weeks of observation by the physician, she decided to seek counsel and accordingly one of the girls was brought to Harper Hospital, where I asked that she might

remain. After some study and numerous diagnoses by other members of the staff, I sent for the other patient who had what the school physicians and myself thought was a like condition. The patients turned out to be the cleverest of malingerers I have thus far observed. Except for the fact that they presented this unusual skin disease, they were per-

fect any meddling. This seal was worn until a new outbreak occurred. I then removed the seal and dressing and to my satisfaction there were no lesions under my dressing, although there were numerous ones on the opposite arm. I then confronted them and asked them for the instrument with which they were producing the lesions. They refused and denied any such act.

In the school they were taught to do Mexican drawn work which they were doing while in the hospital. One of the girls had a pair of curved manicure scissors through which she produced this unusual skin condition periodically. The exposure and the thought of returning to school on the following day alarmed them whereupon they threw their clothes and their belongings out of the window and escaped from the hospital that night.



Cases VI and VII. Feigned eruption. Conditions produced by manicure scissors.

fectly well. The clinical picture was always a well developed lesion of the same size and in the same areas and always developing at night. The lesions were clean-cut pear shaped, going well into the true skin and covered with a bloody crust. The eruption was symmetrical and located upon exterior surfaces. Recurrent attacks appeared once in from seven to ten days. The lesions did not itch and gradually healed without pus formation leaving a distinct variola form scar. No developing primary lesions were ever seen nor did section from around lesions afford anything except negative knowledge. No assistance could be elicited from the patient in helping to see a fresh outbreak. Orders to notify the nurse and she in turn the interne that he might notify me were never complied with. Yet all forms of treatment were most willingly accepted.

Being quite convinced that the condition was self-inflicted, I decided to apply one more test, this being to take out a good section of skin, dress the area, and seal it in such a manner that I could de-



Cases VI and VII. Feigned eruption showing excoriations from friction.

I completed my history through the mother of one of the girls. She told me that they had no more outbreaks of the skin trouble after they left the hospital and that they were cured by Cuticura remedies. This information I obtained from her only after promising that the Board of Directors



Cases VI and VII. Feigned eruption showing method of trapping the patient by bandaging.

of the school would release the girls if they would return to their homes.

CASE VIII. Mrs. S. R., age 50, widow, divorced, husband living. General health good, neurotic. Her husband supports her through order of the court.

She presented a symmetrical eruption of the chest, arm and legs, none on the back. The lesions were clean-cut, variola form with blood crusts leaving scars. There were no scratch marks or accompanying inflammation. This patient was presented to the diagnostic clinic at Harper Hospital and much interesting discussion followed, whereupon I presented the instrument with which she was producing the lesions.

Her motive was to arouse some sympathetic interest and break the lonely mental torture she was living in.

She recovered promptly after exposure of her deception.

BIBLIOGRAPHY.

- Hardaway, W. A. Observations on Feigned and Artificial Eruptions of the Skin. St. Louis Cour. Med., 1886, XV, Cisterne, J. Des dermatoses simulées. Par., 1887, 71 p. 4°. No. 280.
- Fox, T. C. Clinical Lecture of Feigned Skin Diseases. Illust. M. News, Lond., 1889, V., 98-104.
- Bowen, J. T. An Instance of Feigned Cutaneous Disease. Bost. M. & S. J., 1890, CXXII, 629.
- Hyde, J. N. Feigned Eruption. International M. Mag., Phil., 1892, I, 500, 1 pl.
- Shepherd, F. J. Some Cases of Feigned Eruptions. J. Cutan. & Genito-Urin. Dis., 1897, XV, 543-50.
- Strausmann. [Eigenthümliche Hautaffection an der Vulva; Artefacte einer Hysterica.] Ztschr. f. Geburtsh. u. Gynäk., Stuttg., 1904, LI, 632.
- Heidingsfeld, M. L. Dermatologic Malingering; with report of Six Cases of Feigned or Factitious Eruption. Lancet Clinic, Cincinnati, 1905, n. n., LIV, 494-501.



Case VIII.

- Little, E. G. G. Case of (?) Dermatitis Artefacta. *Proc. Roy. Soc. Med.*, 1907-S, I, *Dermat. Sect.*, 83-5.
- Curtis, F. C. Feigned Diseases of the Skin. *Med. Rev. of Rev.*, 1908, XIV, 354-8.
- Heidingsfeld, M. L. Case of Feigned Eruption. *Lancet-Clinic*, *Cincin.*, 1908, XCIX, 191.
- Pernet, G. The Psychological Aspect of Dermatitis Factitia. *J. Cutan. Dis.*, 1909, XXVII, 547-53.
- Fox, T. C. Case of Dermatitis Artefacta. *Proc. Roy. Soc. Med.*, 1909-10, III, *Dermat. Sect.*, 28.
- Adamson, R. O. A Case of Dermatitis Artefacta and Its Sequel. *Brit. M. J.*, 1910, II, 15.
- Alderson, H. E. Dermatitis Factitia in a Patient with Pruritus Generalis; a case report. *Calif. State J. M.*, 1910, VIII, 67.
- Walker, N. A Clinical Lecture on Dermatitis Artefacta. *Brit. M. J.*, 1910, I, 1481, 1 pl.
- King, J. M. Dermatitis Factitia, with Report of Cases. *South M. J.*, 1911, IV, 433-6.
- Shaw, A. F. B. Artificial Eruptions. *Dublin J. M. Sc.*, 1911, CXXXII, 177-86.
- Smith, D. K. The Psychological Aspect of Dermatitis Factitia. *Canad. Pract. & Rev.*, Toronto, 1911, XXXVI, 546-48.
- Stelwagon. Dermatitis Factitia. *J. Cutan. Dis.*, 1911, XXIX, 406.
- Kingsbury. Dermatitis Factitia. *J. Cutan. Dis.*, 1912, XXX, 24.
- Weber, F. P. Artificial Skin Eruption. *Proc. Roy. Soc. Med.*, *London*, 1912-13, VI, *Dermat. Sect.*, 115.
- Brocq, L. Les Eruptions Artificielles Provoquees Par Le Goudron de Houille Brut. *Ann. de dermat. et syph. Par.*, 1913, 5 s., IV, 270-88.
- Fordyce. Dermatitis Factitia. *J. Cutan. Dis.*, 1913, XXXI, 500.
- Freeman, W. T. Case of Dermatitis Artefacta. *Proc. Roy. Soc. Med.*, 1913-14, VII, *Dermat. Sect.* 55 & P. 159, 36, 56.
- Little, E. G. G. Dermatitis Artefacta. *Brit. J. Dermat.*, 1913, XXV, 68.
- Mackwood, J. C. A Case of Dermatitis Artefacta. *Brit. M. J.*, 1913, I, 1160.
- King, H. D. Malingering. *N. Orl. M. & S. J.*, 1914-15, LXVII, 989-1000.
- MacLeod, J. M. H. Case of Dermatitis Artefacta. *Proc. Roy. Soc. Med.*, 1914-15, VIII, *Dermat. Sect.*, 106, (89-91).
- Gilmour, A. J. A Case of Artificial Dermatitis. *J. Cutan. Dis.*, 1915, XXXIII, 34.
- Ormsby, O. Factitious Dermatoses. *J. A. M. A.*, 1915, LXV, 1622.
- Stofford Taylor, G. V. Self Inflicted Eruptions. *Liverpool M. Chir. J.*, 1915, XXXV, 326-32.
- Chavigny. Malingering Factitious Phlegmons and Jaundice to Escape Military Service. *Paris med.* 6: 150, Aug. 19, '16.
- Collie. Fraud and Skin Eruptions. *Lancet* 2; 1908, Dec. 16, 1916.
- Lumsden, T. The Psychology of Malingering and Functional Neuroses in Peace and War. *Lancet*, 1916, II, 860.
- McKellar, H. R. Malingering. *Military Surg.*, Wash., 1916, XXXIX, 293-99.
- Tests for Detection of Malingering Among Soldiers. *Lancet*, 1916, II, 80.
- Williams, D. H. The Malingeringer. *N. Y. Med. J.*, 1916, CIII, 684-6.
- Carruccio, M. Malingering-Factitious Skin Affections. *Policlinico (sez. prat.)* 24: 716, May 27, 1917.
- Kleberg, F. Malingering—Simulation and Aggravation of Morbid Conditions in Relation to Insurance, Workmen's Compensation, Escaping Military Service, Etc. *Hygiea* 79: 334, April 16, 1917.
- Laignel-Lavastine. Psychology of Malingering. *Paris med.* 7: 14, July 7, 1917.
- Milian, G. Malingering—Factitious Eruptions and Ulcers. *Paris med.* 7: 343, May 5, 1917.
- Sabella, P. Malingering—Factitious Skin Affections Among Soldiers. *Policlinico (sez. prat.)* 24: 717, May 27, 1917.

INTESTINAL OBSTRUCTION.*

I. N. BRAINERD, M.D.

ALMA, MICH.

"When called upon to deal with a case of acute intestinal obstruction the surgeon is confronted with one of the gravest and most dangerous emergencies. The patient may be, and often is, a man or woman in the prime of life, in full enjoyment of vigorous health, who, without warning is suddenly seized with the most intolerable pain in the abdomen, followed by collapse and vomiting, at first slight, but later

unremitting. The abdomen distends, intestinal action ceases, and the bowel above the block, loaded with retained and septic contents, becomes a vehicle for the absorption of products whose intensely poisonous action hastens the patient to his end."

From this theorem, so well stated by Moynihan, it is easy to draw this corollary: Every case of ileus, known or suspected, should be hurried to a surgeon without delay.

But let us particularize first in our consideration of this subject, and generalize afterward.

The most frequent form of ileus is intussusception—a condition in which one portion of gut slips into another, telescope fashion. The ileum may telescope into the ileum, or the ileum may telescope into the cecum, or the cecum into the colon, or the colon into the colon or sigmoid; but the most frequent variety is the ileo-cecal.

This form of obstruction is most frequent in children under five years of age, and half of them are less than one year old. This is because of the relatively longer mesentery in children, permitting greater mobility of the gut.

When invagination takes place there will always be three tubes in the mass, and there may be five or even seven. Mucous membrane will be opposed to mucous membrane, and serous membrane to serous membrane. The serous membranes will speedily grow together if they be not kept apart by serum, and are not soon choked to death. The invaginating is usually downward, though it may be upward. The entering part is called the intussusceptum, and the receiving part is called the intussusciptiens.

More or less complete obstruction, usually complete, soon follows. The bowel will empty itself below the obstruction, and will collapse; while that portion above the obstruction will be distended. The passages will consist mostly of bloody mucus after the first. The lower down the obstruction is, the greater is the tenesmus. The higher up it is, the greater is the nausea and vomiting. A tumor is palpable, usually in the right groin. Not always so. The pulse and temperature may be normal, or the temperature may be subnormal. Pain is always present, and is usually remitting. Surgery is the only treatment that can relieve. But the mortality is high—probably 75 per cent. It need not be over 10 per cent. if we could get the cases early. According to Sargent's table the mortality following operation the first day is 37 per cent. The second day, 39 per cent. The third day, 61 per cent. The fourth day,

*Read at the Dec. 20th meeting of the G. I. C. County In Alma by I. N. Brainerd, M.D.

67 per cent. The fifth day, 73 per cent. The sixth day, 75 per cent.

Meckel's diverticulum, which is an unobliterated portion of the vitelline duct, and enters the ileum at one to three feet from the ileo-cecal valve, may invert itself and pull the gut in after it. A polyp in the gut may be urged onward with so much force by peristaltic action as to invaginate a portion of the gut as it did in one of my cases, which I now relate.

The patient, Case No. 874, was 13 years old. Two and one-half months before the operation she swallowed a large button. No harm followed at the time, and the button had not been recovered, though they had searched for it. The day she came into my care she was seized with a violent pain in the right side, a little below the liver. It was believed that this pain and the other symptoms were caused by that button. Physic came up. The vomitus became feculent. Injections were returned without feces after the first. Obstruction was diagnosed due to the button. Operation at midnight showed a mass under the liver. When it was turned out of the belly it was found to be an ileo-ileum intussusception. With much difficulty I succeeded in disengaging the intussusception, and then found a tumor in the gut. This was three-fourths of an inch in diameter, and pedunculated. Eighteen inches of gut was invaginated, and half of this was dead. It was all removed and an end-to-end anastomosis made with a Murphy button. We put her to bed and gave an unfavorable prognosis. She died in twenty-four hours.

Other patients that I have operated follow:

Case No. 777 was a baby seven months old. Eight inches of ileum was telescoped into the ileum. The baby had been sick three days, and had passed a tea-spoonful of blood. He was tympanitic, and looked bad. He died a few hours later.

No. 926 was a girl eight years old. She climbed upon a sleigh which was passing the schoolhouse, sat down near the rear end and fell off backward. She went into the school-house crying. Later in the day, at her home, she played hard. The next day she made no complaint, and played. The next day she complained some, and did not, I think, go to school. That night, the second night after the fall, Dr. Gardner was called and diagnosed the case, and ordered her into the Hospital. Early the next morning the operation was made. The patient had taken physic and enemas without result except vomiting. An ileo-ileac intussusception was found. Twenty inches of gut was telescoped, and was released with difficulty. The gut was black, but recovered color when hot water was poured over it. The patient died in ten hours.

No. 1029 was a boy three years old. His was an intussusception through the ileo-cecal valve. He had been sick but a short time and lived but a few hours after the operation.

No. 1138 was a baby boy less than three years old. His was an intussusception through the ileo-

cecal valve. Thirteen inches of gut was resected. He died in a few hours.

A volvulus is a twist in a loop of gut, shutting off the blood-supply and obstructing the lumen of the gut. The twist must make more than two-fifths of a revolution to obstruct. One in forty of all cases of obstruction is of this variety. These cases are more frequent in men than in women, and in adults than in children. They result usually from muscular efforts. A mesentery too long allows too much mobility, and one too short is too soon effectively blocked. Volvulus occurs most frequently in the sigmoid and colon. If the twist be in the sigmoid the colon may be so distended as to fill the belly. If in the colon the cecum will be distended. It may be impossible to untwist the twist without opening the gut in many places and drawing off the gas and fluid. The loop soon becomes gangrenous. The symptoms are the same as in the former variety.

My first case of volvulus I am obliged to give from memory, as I can not find it among my records.

The patient was a man aged about 50. He was a dealer in agricultural instruments, and had been unloading some heavy goods. While at this work he was seized with severe pain which led him to call his doctor. The next morning I was called and did a section upon him. A loop of ileum was twisted enough to occlude it. Of course the gut was collapsed below and distended above the block. This loop was temporarily paralyzed, thus causing some tendency to continued block in fecal movement. He had been vomiting feces, and continued to do so after the operation for a short time. He made a good recovery.

No. 544. A man of 28 years. The volvulus was in the ascending and transverse colon. Peritonitis of all surfaces of the mesocolon that was involved, and a fearful congestion of the colon were present. The colon was black and ecchymotic. The patient was down town in the evening, and went in to see a doctor. At two o'clock the next morning he sent for the doctor. At eleven I operated upon him and found the conditions as described. He died the next day.

Sometimes we get an ileus by an adhesion band biting down upon a loop of gut. This condition is not very frequent, and it is claimed that one end of the band will always be attached to the omentum. I have often seen the omentum adherent, but only once have I seen strangulation of the gut from it. This was my No. 492.

The patient was a woman 25 years old. She had had an oophorectomy three years before this event. The gut had been strangulated. She had stercora-

ceous vomiting. She was in a fearful condition. I released the gut and predicted death which came in seven hours.

My No. 1172 goes in this class of cases. Eleven months before she had her appendix removed. On this occasion a mass developed rapidly in the right groin. I believed it to be an abscess, but found a strangulated gut under a band in the right iliac region. I released the gut when it rapidly filled and the color soon came right. She promptly recovered.

Stricture and gangrene may also be met with in herniæ through the inguinal and femoral rings, and through the navel, and diaphragm, and obturator membrane, and through tears in the mesentery, and through rents in the belly fascia. I have seen many cases of incarcerated and strangulated herniæ, one case being an incarcerated and strangulated ventral hernia. This was in an old man.

No. 966. There was a history of an injury at this point eight years before, followed by a large hernia. He said that it filled half of his lap. Since that time the hernia has been in and out, but growing smaller. This time he could not get it back. At the operation the gut was found in a bad condition, but it cleared up upon the application of hot towels. He lived.

Stricture of the gut may cause ileus. Dynamic strictures are reflex contractions of the gut, and may be due to the pain of renal or hepatic colic, strangulation of the omentum, injury of the testicle or ovary, and it may follow a severe spinal injury. A dynamic, or organic, stricture may follow diphtheritic ulceration, ileo-colitis, typhoid fever and syphilitic ulcers, as well as traumatisms.

No. 470 was of this class. This man was 32 years old. A year previously to his calling upon me he had been hurt by a piece of board thrown endways from a saw, hitting him in the left groin. He was senseless for three hours, and had peritonitis for thirty days. He had had signs of intestinal obstruction ever since the accident. He had had vomiting spells about every ten days. At the operation I found eight inches of the gut strictured more than one-half. I resected the stricture and the man has been well ever since—now fifteen years.

Twice I have seen post mortem intestinal strictures which I supposed were due to ileo-colitis in infancy.

The first one was in a girl fourteen years old. She had been sick many months and doctors could not agree on the case. Four or five men treated her. I with others. At the autopsy we found four or five circular scars in the ileum which had so stenosed the gut that you could not get a lead pencil through.

The next one Dr. Snyder and I autopsied a few months ago. This patient was a boy aged six; but

he looked like a boy of four. We found three constrictions like the former, but not so tight. I believed that these were cicatricial strictures following ulceration in ileocolitis in infancy.

Obstruction may be due to the presence of foreign bodies which have been swallowed, or to gall-stones which have ulcerated their way into the gut, to enteroliths, worms and to hard feces.

But the most terrorizing cases of ileus are the post operative cases, because the operator feels that he has been a partial cause of it. The gut is paralyzed and distends to a fearful extent. The stomach, too, undergoes acute dilatation. This casualty is most likely to occur in women who have extreme constipation. It may be best to open up the wound and to puncture the gut in many places to relieve the tension. To lessen the liability of this catastrophe, all patients coming to abdominal sections from other causes than intestinal or peritoneal troubles should be purged clean if there be time enough. Large volumes of gas are evolved from the retained feces, and the tension from the tympany adds to the suffering. Rough handling of the gut leads to it, and long exposure to air. Gastric and colonic lavage before and after the operation are recommended. Small doses of physic should be given in a day or two after the operation. If immediate results are wanted, give enemata. Opiates lessen peristalsis and lessen pain, but should be given very circumspectly.

Now let us come back and generalize. And this can best be done in the beautiful diction of Dr. Moynihan:

"It is still unfortunately true that in the very great majority of cases the surgeon is called upon to act in too late a stage of the disease. It is not too much to say that in a consecutive series of twenty cases of average intensity, the condition disclosed at the operation will show that in at least fifteen operation has been too long deferred. * * * Allowance must, of course, be made for the early difficulty of diagnosis. There are many cases of acute abdominal pain which a dose of morphine permanently relieves, or a brisk aperient drives away. And in its earliest development a case of acute obstruction may differ in no perceptible degree from any of these. The administration of morphine in such a case of acute onset is held to be necessary—to be, indeed, inevitable. But it is not the one dose of morphine which does the harm; it is the needless repetition of the dose. It is not altogether unsafe to say

that an acute abdominal pain which a small dose of morphine does not wholly remove is not rarely due to a lesion within the abdomen that only an operation can relieve. For many of the patients who suffer an acute seizure of abdominal pain a hypodermic injection of morphine is the too-ready refuge of the surgeon. In administering morphine the surgeon is acting with the highest authorities, a sanction which, it has seemed to me, has been too readily given. An eminent authority, in a chapter more beautifully written and more pregnant with harm than almost any other chapter of modern surgery has said: 'Morphine is an absolute necessity in a case of acute intestinal obstruction, and should be administered with as little delay as possible,' and behind this opinion of one whose word is weighty, many of us have been content to shield ourselves. The advice is bad. There is no absolute need to administer morphine—there is no justification for repeating the dose unless means are taken to obtain the opinion of a surgeon, or unless the diagnosis is clear and the practitioner is fully aware of the condition which he is deliberately treating—if, that is to say, morphine is a remedy, and not a refuge. It is true, as I have said, that many apparently serious cases of acute pain of sudden onset, attended by sickness and perhaps by slight collapse, are relieved of all present troubles by the giving of morphine. But if the condition of the patient is such that a second or larger dose of morphine is speedily called for, the suspicion of the surgeon should be on the alert, and the probability (for it is no less) of the condition being one of mechanical block of the intestine or other grave surgical catastrophe should be borne in mind. It is in no small degree the administration of morphine which is responsible for the serious disastrous results in cases of acute obstruction. The comfort and repose thereby induced mislead the practitioner into the belief that the disease is of trivial import; and yet, during every hour, the pathological conditions within the abdomen are changing for the worse. When the exact state of affairs is revealed on the operating table it will constantly be found that precious time has passed away, and that the operation, whether ultimately successful or not, has been performed too late. The surgery of acute obstruction is disheartening work.

* * * * *

"An examination into the conditions found at an operation or at an autopsy shows that in

all cases two factors are at work in determining the fatal issue. Of these, the first and least important is mechanical block in the bowel—the actual obstruction. The second, and incomparably the more serious, is the septic absorption from the distended, congested, and perhaps ulcerated bowel above the place of stoppage. It will be clear, therefore, that in operating upon patients so affected the relief of the mechanical obstruction is but a part—and that the smaller and least significant part—of what the surgeon must need do. The overloaded bowel must be emptied of its putrid contents; and no operation should be considered complete until this has been done.

"During the operation the surgeon will need all his dexterity, rapidity and judgment if he is to be successful. In all abdominal operations speed is a desirable thing, here it is an imperative necessity. The surgeon must discover what has to be done and must do it with all possible despatch.

"Two points in the preparation of the patient need to be emphasized: The stomach must be emptied and washed out, and the skin of the abdomen must be carefully cleaned. The stomach is often greatly distended, being filled with a turbid, yellow or brownish-yellow, highly offensive fluid. Some fluid of this kind has probably been vomited upon many occasions within the few hours preceding the operation; but the stomach rapidly fills up again with similar material. If the patient is anesthetised with the stomach overfull it often happens that as soon as general relaxation is produced there is a profuse gush of this fluid through the mouth and nostrils of the patient, and if a deep inspiration be taken, the trachea is filled. The patient, indeed, is drowned in his own vomit. The stomach, therefore, should be emptied. If necessary the throat may be wiped over with cocaine solution before the tube is passed. After the stomach is emptied it is washed out with two or three pints of hot salt solution until the returning fluid is clear. The anesthetic is then administered.

* * * * *

"So far as the anesthetic is concerned, it must be pointed out that the less there is given, provided insensitiveness is produced, the better. It is too much to ask to have the patient profoundly anesthetised so that his abdominal muscles may be relaxed or free from the turbulent movements of deep breathing. The previous administration of morphine will have lessened

the need for a free administration of ether or chloroform.

* * * * *

"It is probable that there are few occasions in surgical practice which are so much simplified by previous experience as the search for the cause, within the abdomen, in a case of acute obstruction. In one's early cases the fingers within the abdomen seem to meet with no part that is capable of being recognized; there is no landmark, and the fingers are apt to wander aimlessly. But by degrees experience comes and, after a few cases have been explored, it is easy to feel at home in the abdomen and to recognize any obstruction without serious difficulty."

Ochsner says: "A statement which should be repeated many times and always regarded when any form of intestinal obstruction is considered, and even when there is the slightest suspicion of the possibility of the existence of intestinal obstruction in any given case, is that it is absolutely impardonable to give either cathartics or any form of nourishment by the mouth. In our experience the mortality has been ten times higher in patients who had been given cathartics before coming into the hospital suffering from intestinal obstruction, than in those who had received none. The reason why it is so dangerous to give cathartics in these cases is because they enormously increase the pressure above the point of obstruction, and consequently the intestine is made more permeable to micro-organisms in its lumen and the increased pressure hastens the occurrence of gangrene of the intestine at the point of obstruction.

"As harmful as is the giving of food and cathartics in these cases, so equally beneficial is the opposite form of treatment by means of repeated gastric lavage, which removes a great amount of poisonous material from the alimentary canal and permits the intestine and the stomach to contract."

A BRIEF SUMMARY OF THE INDICATIONS FOR ROENTGENOTHERAPY.

JAMES T. CASE, M.D., F.A.C.S.

BATTLE CREEK, MICH.

No attempt is made to cover the entire ground but simply to mention the principal diseases which have shown themselves amenable to X-ray therapy.

SKIN LESIONS.

In general, it may be stated that all chronic skin lesions which have resisted other means of

treatment are benefited by X-ray therapy. It was formerly the custom to use soft tubes but nowadays I prefer to employ hard rays even for many skin lesions because in some cases the disease extends into the deeper layers of the skin to reach which the harder X-rays are needed.

There are few, if any, acute skin diseases in which the X-ray is indicated, unless it be weeping eczema (stubborn case). Even in chronic lesions, X-ray therapy should not be employed unless the case has shown itself resistant to ordinary means.

Before beginning X-ray treatment it is very important to enquire of the patient whether previous X-ray applications have been made, and unless the patient has been treated by a well known roentgenologist who sends a letter giving very specific information as to the dosage given and dates of treatment, it is best to decline to treat the case again with the X-ray until after the lapse of three full weeks.

It is also important in dealing with all skin lesions to bear in mind the possibility of the case being luetic.

Both patient and physician may be saved subsequent distress if care is taken to make a certain explanation regarding some of the dangers of X-ray therapy, in order to be forewarned in case of an untoward reaction. I am convinced that there are occasional cases of idiosyncrasy.

It is now recognized as a general rule in all roentgenotherapy, with the exception of malignant cases that a definite reddening of the skin should be studiously avoided. Past experience has taught roentgenologists that if a reddening of the skin does not occur there will be little danger of telangiectases developing at the site of treatment. If a reaction of the first degree, or worse, does occur following treatment, it is a very good invitation for the later development of telangiectases although they may not make their appearance for from one to three years, perhaps even longer, though in the majority of cases they do not occur at all.

It is important not to use any other irritant drugs or measures which will tend to inflame the skin and thus encourage an X-ray burn. The ordinary safe dosage of X-ray is unsafe when the skin is irritated, as by some of the ointments which are used in various skin lesions.

RING WORM.

Ring worm of the scalp, beard or elsewhere, as of the nail, is curable by X-ray therapy

which has come to be recognized as specific for this disease. Fair haired children and individuals respond to smaller dosage than those of dark complexion. The scalp or beard should be shaved before treatment is begun and the parts should be kept well greased. It is a common saying among the leaders of roentgenology that a man who can treat ring worm properly has acquired the necessary fundamental knowledge to qualify him to practice roentgenotherapy.

ECZEMA.

In general, only sub-acute or chronic eczema should be treated with the X-ray, and for these cases hard rays are usually required. Sometimes an obstinate case of moist eczema responds favorably to carefully administered roentgenotherapy. Acute cases are much less tolerant of X-rays than chronic cases.

PSORIASIS.

Cases treated with the X-ray tend to clear up more rapidly than under any other form of treatment, and there is less tendency to recurrence. The same caution regarding the simultaneous use of irritant ointments and other irritant measures given for eczema applies in the use of the X-ray for psoriasis.

LICHEN.

Some forms of lichen respond to roentgenotherapy; others do not respond at all. The X-ray should be reserved for the resistant cases. Lichen planus gives best results.

PRURIGO.

Some forms only of this disease are amenable to X-ray treatment. It is worth trying when other methods fail, but only hard, filtered rays should be used.

LEUKOPLAKIA.

Roentgenotherapy is very good in these cases. Many of them are luetic and require specific treatment, but even in these the X-ray will hasten the result. Radium is also good in these cases. If a case of leukoplakia proves to be very resistant, suspect carcinoma.

ACNE VULGARIS.

The treatment and indications are the same as for Eczema. In our experience, roentgenotherapy is especially indicated in obstinate acne vulgaris.

ACNE ROSACEA.

Cases of acne rosacea do not give good results under X-ray treatment. They sometimes im-

prove with radium, using a flat applicator and not much filtration.

LUPUS VULGARIS.

Roentgenotherapy is almost specific for lupus vulgaris and is the most appropriate treatment.

LUPUS ERYTHEMATOSUS.

It is best to use radium in these cases, and to avoid producing a skin reaction, for if one is produced it may mean the later development of telangiectases. The flat radium applicator is best in these cases.

WARTS.

Verruca Vulgaris are amenable to X-ray therapy. The other kinds of warts are not amenable to this form of treatment. Strange to say, the treatment of one wart or of the warts of one part may cause the disappearance of warts on other parts of the body. We have noticed this several times and it has been reported on numerous occasions.

PAGET'S DISEASE.

Treat exactly as cancer. Operation should be done in all cases. Do not temporize with the X-ray except as a pre-operative measure. Operation should not be delayed.

MYCOSIS FUNGOIDES.

The lesions of this disease are often so extensive as to require prolonged treatment, but the results are good, better perhaps than with any other measure.

BLASTOMYCOSIS.

Such cases may be accepted for roentgenotherapy if the lesions are given a preliminary curettement.

PORT WINE MARKS.

Radium is probably preferable for these cases, although the X-rays may be used.

NAEVUS PIGMENTOSUS ET PYLOSUS.

The X-rays are helpful in these cases although radium is also useful.

PARONYCHIA.

The X-ray treatment helps and will frequently cure. One must be on the lookout for specific infection.

KELOID.

Keloid responds well to nearly full doses of heavily filtered hard rays. The treatment should be given but once a month and one should be careful not to exceed or quite reach the erythema dose. It is best to tell the patient the treatment will require several months.

LUEPIC LESIONS.

As above remarked, it is true that X-ray treatment sometimes aids in connection with the specific treatment.

ULCERS.

In *simple ulcers* the X-ray in low dosage stimulates healing. Very resistant fissures of the tongue or the lips are sometimes made to heal under stimulating doses of X-ray. One should look out for luetic lesions under these circumstances, however.

Roentgenotherapy is the method of choice in *rodent ulcer*. The ulcers tend to recur and therefore a prophylactic treatment should be given on several occasions, that is after the ulcers have disappeared. Even then the scar may break down. Cases with involvement of bone or cartilage are exceedingly obstinate. I believe that in such cases the application of the X-ray should be combined with the thermocautery. I prefer the thermo-coagulation method.

HYPERIDROSIS.

Roentgenotherapy is very effective. It destroys or at least diminishes the activity of the glands. The effect is permanent. One should aim at partial effects only for the end result will be greater than the first results promised. It is not necessary to destroy the hair follicles but it is difficult to judge the dosage so carefully as to avoid the destruction of the hair follicles. It is better to decline to treat hyperidrosis of the head.

SUPERFLUOUS HAIR.

I have always declined positively to treat any case of superfluous hair no matter whether on the face or on the arms. I hold that the application of the X-ray is attended by too many dangers to use it as a cosmetic. Atrophy of the skin, or even worse, is the usual result if the treatment is successful in getting rid of the unwelcome growth of hair.

ENLARGED GLANDS.

Simple inflammatory glands if chronic are amenable to the X-ray. If there is a persistent sinus after drainage of a suppurating gland, X-ray treatment will help close up the sinus. It is of course, important to make sure that the gland is not a manifestation of lymphadenoma.

Lymphadenoma, recurrences must be repeatedly treated. The patient, of course, ultimately dies of the disease but the X-ray treatment will prolong life. It is the best known method of treatment.

Tuberculous Glands.—Tuberculous glands

should be treated with the close co-operation of the specialist in tuberculosis. Careful blood examinations ought to assist. In making X-ray applications one should be guided by the same principles which guide the administration of tuberculin, for the X-ray stimulates the production of the antibodies much as does tuberculin.

I have come to the definite conclusion that in our work we should consider that the application of the X-ray does not stimulate the development of activity in a latent tuberculosis. I have talked this matter over with a number of leading roentgenotherapists who are interested in this matter and we have agreed on the above opinion.

Sarcomatous Glands.—One should always seek for the primary lesion, looking especially at the mediastinum. The X-ray treatment very rarely if ever *cures*, in fact, I am inclined to feel that in apparently cured cases there was a wrong diagnosis. So far as I have observed, recurrences occur sooner or later. The application of radium preferably by the block applicator method, is especially helpful in treating around the neck and under the jaw, the advantage being a matter of greater convenience.

Carcinomatous Glands.—Here again one should look for the primary lesion. One cannot reasonably hope for a cure. There will be occasional cases where the result will be most unexpectedly satisfactory. In the average case there is only palliation, yet palliation is very much worth while.

EPITHELIOMA.

When early, treat with the X-ray, excise and then treat again. Allow at least ten days to elapse between treatments. Use either radium or X-ray. Personally, I prefer X-rays in most situations. If the mucous membrane is involved the cases are obstinate. Cases of basal epithelioma are most amenable to treatment. Prickle cell growths are most resistant. The diagnosis should practically always be made by microscopic study; incision of specimens is apt to insure a spread of the trouble.

In sufficiently early cases of epithelioma I would recommend that a lead protector be made exactly fitting the lesion; and then, on the lesion thus protected, without filter but using a very hard tube, give a dosage equivalent to 50 x units. Then change the shield for one with a larger opening exposing the ulcer and in addition a ring of normal tissue about half an inch in diameter on all sides, or even greater in

the prickle cell cases, and treat with very hard rays, filtering through three millimeters of aluminum and a thickness of leather.

SARCOMA.

I would not treat any operable case except as a pre-operative treatment. Inoperable cases often respond very well to the X-ray. On the whole, sarcoma responds better than carcinoma. The general plan of treatment is the same as for carcinoma.

CARCINOMA.

One should never defer an operation to give X-ray treatments. It should be an inflexible rule not to be content with the X-ray treatment of any operable case to the exclusion of operation. I believe it is a good plan to give a pre-operative treatment in all operable cases. (I formerly recommended a delay of six to eight days between the application of preoperative treatment and the operation. I no longer give this advice preferring that the case go to operation immediately after the treatment, the same day even or at least the next day). If all the skin which has been previously treated is removed at the operation, as will sometimes occur, the post-operative treatment may be begun at once. Otherwise, I would postpone it for at least ten days.

Inoperable cases occasionally become operable under X-ray treatment. Sometimes operation is indicated to remove a large mass of diseased tissue or to get rid of suppurating surfaces. The ultimate result in malignant disease is not encouraging.

Recurrent carcinoma comes under the same category. Life is prolonged. The treatment is indefinitely worth while but the end results are unsatisfactory. It should be borne in mind that ulcerated areas will stand more X-ray treatment than areas where the skin is unbroken.

Herpes Zoster.—X-ray occasionally helps. Use only one application or hard filtered rays. Do not forget aseptic dressings in these cases.

PROSTATIC HYPERTROPHY.

X-ray treatment is helpful in many cases of prostatic hypertrophy, but the length of treatment required to produce results is such that I would never think of using it where an operation is feasible. Radium is helpful but must be used carefully in combination with roentgenotherapy. A special radium applicator for use in applications in the prostatic urethra is helpful. If hyperplasia of the glandular elements

predominates, the case will respond to treatment. If fibrous tissue predominates, the case will not respond so well, or perhaps not at all. The patient should be cautioned that the first twenty-four hours following intensive treatment is likely to be uncomfortable on account of a primary swelling of the gland but this is only temporary.

One should be very careful that he is not treating an early carcinoma of the prostate when he undertakes the X-ray treatment of one of these cases. It is safest to advise early operation. The results are very much more prompt with operation. I would recommend the use of X-ray treatment only in inoperable cases.

UTERINE FIBROIDS.

The same thing may be said of uterine fibroids as of prostatic hypertrophy. There have been some very striking results. I have described the pros and cons of this treatment in "The Surgical Clinics of Chicago" for June, 1917. I prefer a combined X-ray and radium treatment. It is not necessary to give such intensive doses as we formerly thought were required; that is, the number of areas to which treatment is given may be considerably reduced. In only a few cases is the tumor made to disappear or even to diminish radically in size. The hemorrhage stops very promptly, usually by the second month and nearly always by the third. I think the arguments are about even for operation or combined radio-therapy in uncomplicated cases of fibroids. Where fibroids are attended by disease of the ovaries or tubes or where there is any suspicion of malignancy, the case should always be operated. Many cases I have treated who deliberately chose the radio-therapy method and finally secured very good results, nevertheless have said with considerable feeling that they wished they had chosen the operative method and had been done with it quickly.

EXOPHTHALMIC GOITRE—HYPERTHYROIDISM.

X-ray treatment is indicated in practically all cases even when operation is contemplated. Some cases respond very well and very quickly to X-ray treatment. Be careful not to produce any reddening of the skin. It is almost sure to be followed by telangiectases. Treat in three areas. It is at present our plan to include the thymus treatment in one application. It is best to give one-third the full dosage once a week and thus treat the patient every week rather than give the full dose at one treatment and to treat only once in three weeks. We are able to

hold the co-operation of our patients better. In no other cases of goiter is the X-ray helpful. When the degeneration is cystic or fibrous the X-ray will not and cannot help.

Syringomyelia.—Syringomyelia is one of the few nerve lesions in which the X-ray has seemed to help. I have never had an opportunity to treat a case but these cases should be subjected to X-ray therapy.

ANEMIA.

In pernicious anemia stimulating doses may help. We have never seen any very good results. The same thing may be said of splenic anemia.

HODGKIN'S DISEASE.

Combined radium and X-ray treatment is indicated. Use the radium around the neck and the X-ray over the rest of the body. Life is prolonged from one and a half to three years but the end result is unsatisfactory. The X-ray is the best method of treatment to-day.

LEUKEMIA.

The principles of treatment of the splenomedullary and of the lymphatic forms are about the same except that in the latter case less attention is paid to the spleen. Be very careful at the first treatment not to administer too large a dose. Fatal results have followed heavy doses at one sitting in such cases. It would be difficult to explain the fatal result. It may have been coincidence but we do not know about that. The differential blood count should be frequently made. One should not carry the white blood count too low. A leukopenia should be avoided. A drop in the total number of leukocytes with an increase in the megaloblasts may augur an early fatal result.

THORACIC DISEASE.

Unresolved pneumonia usually responds marvelously to a single intensive application of X-ray. In tuberculosis of the lungs the question of X-ray treatment is unsettled. There is good experimental ground for believing that X-ray treatment will help. Malignancy in the lungs or mediastinum should be treated with the X-ray especially by the cross-fire method. Cases of endothelioma of the pleura are most responsive but the end result is bad in all cases. If the diagnosis of a mediastinal tumor is not clear, use X-rays on the chance of helping it.

BOILS.

Boils and carbuncles often clear up very quickly under X-ray treatment and if the X-ray treatment be given it may abort them. I have seen this occur a good many times.

MISCELLANEOUS NOTES.

Analgesic effects have been noted by a good many authors. I am afraid to use the X-ray for its analgesic effect and I do not recommend it for this purpose except in malignancy.

FIBROID ANKYLOSIS.

Fibrous ankylosis occasionally is helped by X-ray treatment.

SOME REMARKS CONCERNING THE SMITH-INDIAN INTRA-CAPSULAR OPERATION FOR CATARACT.

FRANK ALLPORT, M.D.
CHICAGO, ILL.

The most important, (and perhaps I might also say, the most sensational) phase of the cataract subject before ophthalmologists at the present time, is what is popularly known as the "Smith-Indian" operation—as performed by Major Smith and modified by many surgeons of less experience. This procedure consists, as is well known, in the removal of the lens in its capsule after the method proposed by Major Smith, and when successful, produces brilliant and ideal results.

The only question for us, as American ophthalmologists, to decide is, whether this operation is the best one for us to perform. I will not attempt to speak for others. (especially as the Smith enthusiasts seem quite capable of speaking for themselves), but as for me, I will say, that I do not feel justified in adopting this operation in my own practice. I am just an average operator—neither better, nor (I hope) worse than my neighbor—and I feel if I can get the average percentage of good results by safer methods for my patients, who come to me for vision, and not for experimental surgery, that it is my duty to give them the best that is in me and I am sure this would not be the case if I began doing the Smith operation. I am perfectly willing to acknowledge that Major Smith and a few other East Indian operators of enormous experience, who do many of these operations daily, can do them successfully and achieve a large majority of brilliant results. I concede this, although I contend that statistical results of all these operations might not be as convincing as the intra-capsular operators desire. These poor blind people make cataract pilgrimages to the Smith Shrine, are operated, and then return as quickly as possible to their distant native hills and are never seen or heard from again,

thus rendering the collection of accurate ultimate statistics impossible. For this reason, we may never know what all the *end* results are of this much extolled surgical procedure, but for the sake of argument, let us admit, that they are all that Smith and his followers claim. There are still other phases of the controversy to settle. In the first place, I doubt very much if Major Smith himself could come to America and produce as good results as he does in India. Of course, this is merely an opinion, and it may be a wrong one, but I believe it is a rational opinion and would prove to be a true one. Smith's patients in India, are tractable, patient, obedient people, unpoisoned by stimulants and excessive and rich food. Quick healing and slight reaction should be the rule under these circumstances. Should Smith, however, come to America he would be confronted by an entirely different class of patients. He would operate on a large number of unmanageable, impatient, nervous, disobedient, opinionated people, accustomed to servility from others, whose bodies have grown fat, flabby and diseased by laziness, gluttony, drink, autointoxication, syphilis, etc. and with whom slow healing and considerable reaction may be reasonably expected. If this is true, then these operators of *less* experience than Smith will surely get even poorer results than he would. On account of his natural skill and immense and unprecedented experience, Smith has acquired a skill and dexterity, unequalled by any living man. He can do things no one else can do; he can meet emergencies better than any cataract operator in the world. The intracapsular operation to him is mere child's play, but while this is an easy procedure for Smith—with his thousands of cases a year—it is a difficult and extra-hazardous operation for such people, for instance, as the writer of this paper, who has never done to exceed fifty senile cataract operations in a year. What right then have I to desert a well-tried, conservative, almost invariably successful operation, which I can perform with comparative ease, in order to try an experimental, sensational, difficult and extra-hazardous surgical procedure, merely because Smith and a few of his followers do it and because some men are doing it in this country, and because it is spectacular. Its advocates will say, in refutation of these statements, that these are not the *real* reasons for their allegiance at all; that they operate on account of the clear pupil, the absence of lenticular and capsular remnants, the lack of iritis and the superior vision. This may

be, and doubtless is true in the successful cases; but what of the unsuccessful cases where collapsed and ruined eyeballs follow in the wake of the ambitious, but perhaps unwise operator? *We do not hear so much of these cases.* "The greatest good to the greatest number" should be the motto of all cataract operators, and I am sure that this result cannot be attained in this country by using the Smith-Indian operation. Some intracapsular operation may be, and I believe will be devised, that will be suitable for *average* operators, but the Smith-Indian operation is not the one. Some claim that this operation is not so difficult after all, but I am confident that only a few over-zealous disciples entertain such optimistic views. The fact is—it is a complicated, difficult and dangerous surgical procedure, except in the hands of a few men like Smith and other East Indian surgeons—and even their hands might lose their cunning unless they were kept in constant practice. Those enraptured and hysterical people who perform nervous stunts when Paderewski plays upon the piano can hardly conceive that his prodigious skill would quickly disappear unless he constantly practiced upon his chosen musical instrument. He himself has said, however, that if he did not practice for one week, his enemies quickly discovered his shortcomings. If he did not practice for two weeks, his friends shook their heads in consternation, and if he did not practice for three weeks, he himself knew that he was only a second rate pianist. And so I believe it is with the East Indian operation. I believe that those surgeons in East India, whose stock of cataracts seems to be in exhaustible, are warranted in performing this operation because they operate many times a day and acquire and maintain a special skill and dexterity, but I do not believe that men in this country, who only operate a few cases a year, should unnecessarily risk vision and the happiness of those patients, who confide themselves to their care, because they, for one reason or another, are determined to risk the Smith-Indian procedure. Those gentlemen who have acquired operative advantages over those who remained at home, by making enterprising journeys to the East Indian Fountain Head of Intra-Capsulology, and have acquired first hand knowledge on this subject, fortified by experimental operating on several hundred unfortunate blind East Indians, seem to have (at least for some time), regarded this operation as the only one to perform. Those operators, compelled to forego the advantages

of this wonderful experience of East Indian post-graduate instruction, naturally sustained a sense of mortification and self-abasement when these travelers, one by one, returned with glowing accounts of the wonders of India. They were forced into a self-acknowledgement of primitive old-fashiondom and reminded one of the little poem in a New York paper after the unsuccessful campaign of Tom Platt, managed by Mr. Lemuel Eli Quigg:

"If I were Lemuel Eli Quigg,
Lem Eli Quigg,
Lem Eli Quigg,
If I were Lemuel Eli Quigg,
I'll tell you what I'd do;

I'd crawl into a woodchuck hole,
An auger hole,
A gimlet hole,
I'd crawl into a gimlet hole
And pull the hole in too."

But this burden of humility has somewhat lightened as time has progressed and it has been observed that those enthusiastic returning cataract pilgrims have mostly—one by one—begun by making various modifications of the Smith operation and its special instruments, and ended by using this operation only in "selected cases"—whatever that may mean. I suspect, however, it means that having once left the "Mysterious East," the personal magnetism of Smith and the fascination of his surroundings, and once more returned to the commonplace and sordidness of America, the

inspiration of the Master has faded gradually away and they have been compelled to realize that *their* individual fields of activities lie, not in India (with its hordes of migrating, cast-off humanity, involving but little surgical responsibility, there eyes may be lost by the dozens without creating any particular disturbance in the ebb and flow of life's tide), but in America, with its distinctly different climate, population and environments, where eyes are eyes, and law is law, and where heavy burdens of responsibilities are loaded on surgeons' shoulders, and where a lost eye may be a very Ghost of Banquo in its power of disturbance and disquietude. Besides this—they have, I fancy, learned quite early that this is an operation requiring constant experience to maintain surgical dexterity and wisdom, and that whereas in India the supply of cataracts is more than equal to the demand, in America even a busy ophthalmologist may not operate perhaps more than fifty senile cataracts per annum. I think, therefore, that, rather than attempt this brilliant procedure, which I believe should only be used under favorable circumstances by exceptionally expert and experienced surgeons, that we might be better occupied in perfecting the quite satisfactory operation with which we are already familiar, and in reaching out along more conservative lines for the future intracapsular operation.

7 West Madison Street.

Bell-Ans (Papayans, Bell).—"Are you going to sit there and let the other folks eat up all the good things just because you are afraid to pitch in, when 2 or 3 Bell-Ans taken before and after the meal would enable you to enjoy your share of all that's coming without a bit of discomfort or distress? Bell-Ans has restored the pleasures of the table to thousands who say: 'I can now eat anything and plenty of it, too.'" The New York Tribune comments that such advertisement as this is not limited to the evil effects to the misguided individual who eats lobster and ice cream at midnight and trusts to Bell-Ans to atone for his indiscretion. The most serious effect of such reckless advice is the example which the advertising sets to other advertisers. (*Jour. A.M.A.*, Feb. 23, 1918, p. 557).

Syphilodol.—According to the French Medicinal Company, Inc., which markets the product, Syphilodol "is a synthetic chemical product of silver, arsenic and antimony * * *." Nowhere in the advertising matter is there a more comprehensive statement regarding the composition of this "new synthetic" than that just quoted. The product is being examined in the A.M.A. Chemical Laboratory: the examination

having advanced sufficiently to show that Syphilodol contains considerable quantities of mercury. Although the advertising leaflet claims that the preparation is "the formula of the late Dr. Alfred Fournier of Paris" and has been exhaustively tested by Metchnikoff, a careful search of French medical journals fails to show any report on Syphilodol (*Jour. A.M.A.*, Feb. 23, 1918, p. 559).

Trousseau's Wine.—This obsolete combination of drugs acting on the heart and kidneys is made by maceration of digitalis, squill and juniper berries in wine and alcohol, and adding potassium acetate to the expressed liquid. (*Jour. A.M.A.*, Feb. 23, 1918, p. 559).

Antiphlogistine.—A. G. Gould, M.D., Plant Physician to the Good-Year Tire and Rubber Company, writes that after corresponding with the physicians in charge, he finds incorrect the claims of the Denver Chemical Mfg. Company, regarding the use of Antiphlogistine by certain establishments. He asks: Is there not some way that such exploitation of our large companies can be prevented? (*Jour. A.M.A.*, Feb. 23, 1918, p. 557).

TRANSACTIONS

OF THE

Clinical Society of the University of Michigan

Stated Meeting, January 9, 1918

The President, JAMES G. VAN ZWALUWENBURG, M.D., in the Chair

Reported by REUBEN PETERSON, M.D., Secretary

REPORT OF AN UNUSUAL CASE OF RENAL CALCULUS.

ROBERT H. BAKER, M.D.

(From the Surgical Clinic, University Hospital, Ann Arbor, Michigan).

The case which I have to report is that of a Greek, 34 years of age, who came to the Hospital primarily for Wassermann examination and treatment of syphilis. His family history is unimportant except that he came from a distinctly tuberculous family. His chief complaint in our Clinic was pain in the lumbar region extending across the back from the midline around to the left side, more severe on the left side. His past history shows a chronic appendicitis from youth for which he was operated upon. He came to America in 1907 and contracted gonorrhea and syphilis. He was treated for six weeks and discharged cured. In 1912 he had an acute attack of appendicitis, was operated upon and discharged in twelve days. He has had acute rheumatism in the left leg with stiffness and pain extending to the foot. He was confined to bed for six months in 1913 with this complaint.

His present illness began in November, 1916, with vague pains low down in the back. His work kept him on his feet and while standing his pain was more constant and relieved by sitting or lying down. The condition became progressively worse until February, 1917, when he began to notice frequent urination. This latter symptom became somewhat painful with pain following the micturition. He noticed his urine was cloudy. In March his doctor gave him internal medication without relief. In May, 1917, he began to feel weak all over, and could not sleep nights on account of a backache. He had lost ten pounds in weight. In July he quit work, the symptoms returning with some burning urination. He came to the Hospital in November and was treated in the Department of Dermatology for three weeks previously to entering our Clinic.

His physical examination was entirely negative. At our first examination we noted that he had no definite area of tenderness on either side, although he complained of dull pain on the left. We noted later that nothing could be found on the right side. The attack which caused him to be referred to us came on in the night following a salvarsan injection.

This was a definite attack of renal colic on the left side. He gave no history of passing a stone, or of bright or dark blood. His tenderness and pain were so unimportant that we were unable to get a history of previous backache. He denied ever having had anything except a dull backache, which had given him no trouble. He denied all history of any distress upon the right side.

December 6th, I examined him and found a bladder mucosa which was normal except for slight duskiess over the trigone. Both ureters were catheterized with ease, but no specimen was obtained from the right side. The left side revealed urine slightly under pressure. At this examination his bladder urine was alkaline, containing albumen, pus, and some blood. Examination of his left kidney urine was absolutely negative, with no albumen, pus, or blood. The left kidney urine was acid. The patient was taken to the X-ray room for pyleogram, where the left kidney pelvis was injected, and nothing unusual found except that the catheter was completely turned over in the pelvis, indicating a large pelvis. The catheter on the right side reached a point which should be the kidney pelvis, but we were unable to force any thorium into the kidney. The X-ray report from this examination stimulated further study. The picture was so unusual that my first thought was that this patient had had a previous barium meal, and that the shadow on the right side was that of retained barium in the bowels. The unusual configuration suggests folds in the colon. The diagnosis was calcification of an old diseased kidney. In an attempt to verify this, a wax tipped catheter which had previously been examined microscopically for scratches, was passed up the right ureter. The waxed tipped catheter was passed into the bladder before the cystoscope to obviate any scratching at that time. Upon manipulation of the catheter after reaching the pelvis of the kidney, and then withdrawing the cystoscope before we withdrew the catheter, we were able to demonstrate definite scratches upon the waxed tip. This examination was repeated three days later to verify the first finding. There was no doubt then that the patient had a stone in the pelvis of the kidney which was causing the trouble.

The unusual features of this case were the size of the stone, the fact that the patient had

had practically no symptoms, and that the symptoms which he had were all left sided.

The one thing which called our attention to his condition was the acute renal colic following his salvarsan injection. In this attack, the pain was very severe, and would have been interpreted under ordinary circumstances as a colic caused by the passage of a small stone down the ureter. I have attempted to investigate the cause or referred pain from one kidney to the other. It is not uncommon to have such referred pain in hydronephrosis, or ptosis. I know of no physiologic or anatomic explanation of this. I would interpret this case as a result of two factors. Undoubtedly his pain which had existed for at least a year, was due to the gradual formation of this stone upon the right side, for which he had a referred pain on the left side. The acute colic following the salvarsan injection might be interpreted as one of two things. Either the left kidney was taking the strain of his whole excretory function, and was so overpowered by the salvarsan that the hyperemia and congestion caused the pain, or the right kidney might have taken some of the strain, and he felt a renal colic which was referred to the left side.

The patient was advised to have an operation to which he submitted. Instead of finding one large stone, we found a large number of stones, which had so completely displaced the kidney tissue that the kidney had to be removed entirely. It is not uncommon to find stones as large as this, but as you know, the symptoms by which we usually diagnose renal calculus are renal colic, hematuria, and pus in the urine. This man must have had some secretion from the right side, which would explain the pus in the bladder, and the alkalinity of the bladder urine when the urine from the left ureter was acid. The diagnosis was made by the X-ray and the wax tipped catheter.

DISCUSSION.

DR. MARK MARHALL: Is there any record of a case where one kidney has been removed, or is not functioning, in which salvarsan has produced pain from overloading or congestion?

DR. BAKER: I am not prepared to answer that question. That point has interested me particularly. The question has come up as to the further treatment of syphilis in this case, and as to whether it was the salvarsan which caused the colic.

DR. LYLE B. KINGERY: I remember this case quite well because the reaction which followed the first injection was rather unusual. I do not know that I can add anything to the theories of explanation. We know that all the salvarsan of an injection is probably excreted within twenty-four hours follow-

ing the injection, mostly by way of the kidneys. With this added work thrown upon the kidneys there would necessarily be a congestion. Occasionally we do find slight pains in the small of the back following salvarsan, particularly large doses, which are probably caused by a transitory hyperemia of the kidneys. If the affected kidney in this case were secreting at all, it was without doubt, called upon to do an extra amount of work following the injection, and with this increased strain it is reasonable to suppose that there would be some sort of a reaction such as we had here. I cannot otherwise explain the question of reference of pain from one side to another. I think the future use of salvarsan in the case should rest entirely upon the condition of the kidney. However, provided salvarsan is given cautiously, and governed by the ability of the kidney to take care of it, the question to be decided is whether the benefit is worth the risk. The relation of this injection of salvarsan to the attack itself, I think can be explained no better than as Dr. Baker has already suggested.

THE TREATMENT OF CHRONIC CONSTIPATION WITH PSYCHOTHERAPY.

MARK MARSHALL, M.D.

(From the Medical Clinic, University Hospital, Ann Arbor, Michigan).

With no desire to foist upon this society a tedious discussion of a commonplace subject, but rather to fulfill a certain obligation to Dr. Van Zwaluwenburg, who dictated the assignment, the writer consented to read this paper.

The symptomatic treatment of chronic constipation by the giving of repeated doses of cathartic is such a simple procedure that many laymen regard themselves as competent to manage their own cases and the physician so often finds that this method meets the approval of the patient that little time or effort is expended in seeking a more rational form of therapy. There are, however, a goodly number of patients who have become dissatisfied with the constant use of cathartics, and who demand of the physician a form of treatment that will enable them to discontinue the use of medicine. In such cases the physician usually outlines for the patient an anticonstipation diet, selecting foods which have a large residue, and may even suggest to them the value of regular habits of going to stool. With this advice the patient is left to his own devices and obtains usually only a partial and temporary relief. As a rule he continues to rely at times upon cathartics which practice sooner or later leads him into his old habit of constipation. The management of a case by this method requires one or possibly two visits to the physician's office. The results are pretty

much in proportion to the time spent in obtaining them.

It is the purpose of this paper to present and to emphasize more rational methods of treatment for this very common condition, which in the hands of those who are sufficiently interested, has given remarkable results. It is based upon the very obvious theory that the intestinal tract of the average man will functionate normally, so far as defecation is concerned, if it is not tampered with. This hypothesis might rather be stated as a fact, since it is a fact, but the perverted mind of man has not accepted it as such in formulating his attitude toward the intestinal functions, so it needs must be stated as a theory until such time as accumulated clinical evidences demonstrate it as a fact. Select at random any normal appearing laymen, and obtain from him his views concerning his intestinal functions. The chances are, ten to one, he is not satisfied with the natural behaviour of his intestinal tract, however free from symptoms he may be, but thinks he can improve upon nature by taking a purgative occasionally, once a week or perhaps once a month. And how can we blame the poor laymen for harboring such a belief, when we realize that every time he ever consulted a physician about a symptom, no matter what the illness or the complaint, the physician gave him a purgative. He naturally comes to look upon the bowels as the hiding place for all disease, and that an occasional sweeping out is the course of wisdom. This tampering with the intestine by the use of cathartics, suppositories and various enemata, is too common to need further comment and frequently marks the beginning of fixed habits of medication. It is a well known fact that there is always a period of constipation following the use of a cathartic, and that with the too frequent use of a cathartic this period of reaction soon becomes the dominant feature.

There is another sort of interference with the bowel movements which while not so obvious as the preceding, yet nevertheless plays an even greater part in establishing a constipated habit. I refer to the mental attitude of the individual toward his intestinal behaviour, an attitude which manifests itself for the most part in a deeply rooted concern as to whether the bowels are going to move with daily regularity or whether the amount passed is adequate to prevent an autointoxication, a more or less mythical physiologic phenomenon, which by virtue of its apparent plausibility has too frequently

served as a cloak to hide our diagnostic shabbiness.

It is a well established fact that even the slightest concern in regard to ones business or professional appointment, will frequently bring about failure of the daily bowel movement. Concern about ones self or ones own health while obviously a far more important factor in establishing such irregularities is usually overlooked by the physician in his analysis of a given case. He recognizes the concern, but regards it, as does the patient, as an effect rather than as a cause of intestinal irregularities. It is a comparatively simple matter to regulate by schedule the physical habits of an individual and thus eliminate many factors productive of habitual constipation, but to regulate his mental habits, is a problem which demands determination, time and infinite patience. It can be done, however, and with such constant and brilliant results that one cannot help regarding most cases of chronic constipation as neurologic conditions, and best treated by psychotherapy.

The general principle involved in the psychotherapeutic management of this condition is not essentially different from that involved in the psychotherapeutic treatment of any functional condition. It presupposes upon the part of the patient a perfect confidence in the physician. After this is attained, the physician has only to suggest the desired result and it comes. This is the underlying principle briefly stated, the detailed application of the principle is somewhat more complicated and will vary a great deal in the hands of different therapists and in the management of different cases. No doubt every one in this kind of work develops his own individual technic, but in order to place this presentation on a concrete basis, the writer will outline in detail his own method of procedure. One begins by telling the patient that in order to come to a proper understanding of his condition it will be necessary to make a very thorough examination. As a rational human being, this will appeal to him. One makes the usual physical examination giving special attention to the abdomen. A rectal examination is always made, and if there is any indication for it, a gastroanalysis. The urine and blood are examined routinely. This examination may cover a considerable time during which one purposely avoids treatment of any kind. If, as in most cases, no obvious cause is found for the constipation, one emphatically assures the patient, that if he follows instructions in detail he will never have to take another dose of med-

icine for his bowels as long as he lives. He is told that a thorough examination has failed to elicit any organic basis for his complaint, that his trouble is of a functional nature. Most laymen have a fairly definite understanding of the difference between a functional and an organic condition. He is told that being normal in every respect, his intestinal tract should behave normally and would do so if its activities were not interfered with in any way; that all of one's internal organs are designed to work harmoniously and automatically and unless they are organically diseased they will do so if not meddled with. In the first place they should not be interfered with by the use of cathartics. The patient is then told of the more important source of interference, namely, the effect of efferent impulses arising within the brain, which inhibit the normal relaxation of the anal sphincter and the proper contraction of the rectal muscles. His attention is called to the common experience of failure of defecation as a result of unusual early morning appointments. An appointment at 8:00 A. M., if it is sufficiently unusual, will inhibit the normal act of defecation which otherwise would have occurred at 7:00, the failure not being due to lack of time but to inhibitory influences. The patient in this way is made to realize the importance of such factors and particularly the inhibitory influence exerted by any worry involving the act of defecation itself. These elementary points in physiology are restated in varying terms and supplemented by concrete examples until the patient has a thorough foundation for further instruction. He is then told to free himself from all concern, as to his internal organs, and to place the responsibility of his case in the hands of his physician. He is instructed to go to stool at a certain time every morning within a half hour after his breakfast and to remain there for ten minutes without undue effort to make the bowels move. If they fail to move, he is to completely disregard the fact as the failure cannot possibly do harm. At this juncture one proceeds to explode the autointoxication theory, which in most instances constitutes a strong foundation upon which the patient has built a vast superstructure of therapeutic fallacies. His ideas in this regard are apt to be deeply rooted, since they are based upon statements emanating from scientific sources, and reinforced by the repeated observations of a physician giving a cathartic as the essential part of the treatment of any illness regardless of the nature of the symptoms. To

say that one proceeds to explode the patient's theory of autointoxication is really overstating the case, for this is hardly the expression for describing a process so tedious. It often requires a great deal of argument to convince the patient in this matter. Merely to state the fact without convincing him leaves a weak point in the presentation of the case, which to be successful must appeal to the patient as uniformly sound. One can state as a fact that there are healthy individuals whose bowels move but once a week and that no symptoms of intoxication such as headache and lassitude are experienced. On the other hand there are many who will develop a headache before noon if the bowels fail to move in the morning, an interval of time between cause and effect which is entirely too short to admit of such an interpretation. If the bowels fail to move in the morning, the fact is not only to be disregarded by the patient but should there be a tendency for them to move later in the day, this should be disregarded and defecation postponed until the following morning at the proper time. This for the obvious purpose of establishing a regularity to the function. The patient comes to the physician's office every day for the first few days of treatment and reports his condition. These frequent visits are essential for its serves to prevent the patient from assuming any responsibility for his condition. Responsibility leads to concern, doubt and worry, all factors detrimental to the successful management of the case. Should the bowels fail to move for two consecutive days (a rare occurrence, even at the beginning of treatment) the patient is given a simple enema. It is invariably given in the morning at the appointed time. Every day the patient is reassured in regard to his condition. One speaks of the many cases treated without a single failure; of cases much more serious than his own that were readily relieved, etc.

A very practical aid in carrying out this treatment is to arrange for the patient a daily schedule. Particularly a fixed schedule for the early morning hours; one which provides ample time between the hour of rising and the time for going to work. For example, for students with 8:00 o'clock classes, the following schedule has been used.

Rise at 6:30 A. M.; breakfast at 7:00. Between breakfast and 8:00 the patient may read, smoke or do anything he likes except work. The inhibitory influence of early morning work is striking. One patient who was an office worker and who preferred to attend to his toilet after

going to the office, was cured by carrying out the only order that was given him, namely, to assume none of his daily duties until the bowels had moved. When, as occasionally happened, he yielded to the temptation to read his morning mail first, the movement failed. It has occurred to the writer, that the constipation in women which almost invariably has its beginning with the first baby, is far more likely to be due to the irregular life and insistent demands incident to the care of a new baby than to the physical traumatism resulting from the pregnancy.

A detailed report of cases of constipation treated with psychotherapy would not interest you particularly. A brief summary of a few typical cases might be worth while.

A maiden lady, age 56, was referred by Dr. R. B. Canfield June 23, 1913, complaining of occasional cramp-like pains in the abdomen and chronic constipation. She was operated six years before, at which time a fibroid uterus was removed and both ovaries. Two years following the operation, the cramp-like pains began and had been the source of trouble ever since. The pains were described in ways that suggested either the pains of colonic adhesions or possibly the pains which accompany the taking of too much cathartic. July 7th, two weeks after treatment was begun the bowels were moving every other day without assistance, and the pains were less severe. Later the movements occurred daily. Two years after the treatment of her constipation she was operated upon for gallstones. The disturbed conditions incident to the operation and the taking of cathartics while in the hospital caused a return of the bowel trouble, which she assured me she could take care of herself, after returning to normal conditions. She has not been heard from since, so it may be taken for granted she is well.

CASE II. A male student, age 22, applied for treatment for constipation, May 11, 1915. For three years he had been subject to severe attacks of constipation. Patient says he does not like to take medicine for the constipation because he believes it makes the condition worse. The first treatment was given three days later. The following morning the bowels moved without difficulty. During the following week the bowels moved every other day. The patient expressed some concern in regard to the infrequent movements. He was told that this could do not harm, and at any time they might begin to move every day. Daily movements began the morning following this suggestion. June 24th, six weeks after treatment was begun, the patient called to tell me of his complete cure, which fact was demonstrated to his satisfaction during the previous week, when he spent four days and nights in a house party, under conditions which previously had never failed to cause trouble.

CASE III. A physician, age 40. Had taken cascara every night for four years. He became interested in the method of treatment employed by the writer and applied for treatment. He wished, however, to make an exception to the usual rule, in that he thought it best to continue the cathartic in gradually diminishing doses. This reservation marked a lack of complete confidence in the method, which predicted ultimate failure, if treatment were attempted under such conditions. He was presented with the necessary statistics and arguments to establish complete confidence, and began his treatment under proper conditions. He was cured in a short time. During the past five years the patient has not taken a cathartic.

CASE IV. A girl age 24 was referred to Dr. R. B. Canfield July 7th, 1913. Patient had been obstinately constipated for six years. For the past year had to take large doses of castor oil every three or four days, and this gave only ordinary results. The patient was almost totally deaf, so her first therapeutic lesson was given to her in typewritten form. The following morning her bowels moved normally without assistance. Unfortunately the patient left town at this juncture and could not be properly dealt with and in fact received no further psychotherapy. However, a letter received from her three months later, spoke of a marked improvement, though she was still using cathartics, though of a milder sort. This case, while not in any sense cured, was of particular interest in that she showed such a remarkable suggestibility, responding as she did to a written suggestion and later maintaining a very definite improvement.

Dr. Curry of a recent graduating class, while yet a student, became interested in the method and undertook the treatment of a very severe case in one of his acquaintances. The case was an obstinate one of six years standing. In six weeks he was entirely cured. Dr. Curry made a most interesting report of the case to the senior class in therapeutics at the time.

Dr. Leslie DeWitt of a previous class, successfully treated a case during his senior year.

About ten years ago, Lyons of Buffalo, reported in the Transactions of the American Society of Physicians, a series of sixty-nine cases treated, with sixty-eight cures. It was this report which stimulated the writer's interest in the method.

DuBois in his book on psychotherapy has a most interesting chapter devoted to gastrointestinal conditions, in which he discusses at length the treatment of constipation. DuBois claims to have had no failures except in cases with a definite organic basis for the trouble.

He recounts an interesting instance in which one of his former pupils, who was very proficient in psychotherapeutic methods, failed in the treatment of a case of constipation, which was manifestly of nervous origin. In order to determine the exact cause of the failure, DuBois asked the physician to relate to him, word for word, his conversation with the patient. The weak point in his argument was found in the following expression. "I am sure I can cure you of your trouble, but if I can't, I know a man who can." DuBois then took the case and within twenty-four hours after the first treatment, the patient began having daily evacuations. Other writers have called attention to the method but nevertheless, it has not come into general use for certain obvious reasons, the first of which is a general lack of interest and confidence among physicians in all psychotherapeutic procedures. The physician also feels that such methods are not only time consuming but are not financially productive. He fails to recognize the fact that a successfully treated patient is willing to pay full value for his advice.

It will be noted that this paper has scrupulously avoided controversial question, such as, what constitutes constipation? May it not be a thing entirely independent of the frequency of defecation? Are there not many individuals who think they are constipated, who only imagine it, and who only have to be convinced of this fallacy, in order to perfect a cure? In other words, what diagnostic standard shall we adopt in defining the condition? The writer has accepted the standard of the patient, which obviously will include varying types of cases under the one heading and might legitimately be regarded therefore, as unscientific. On the other hand, the attempt to classify all cases under the heads of spastic constipation, paralytic constipation and the more fanciful, latent constipation, while it may be very attractive from the standpoint of diagnosis, has been such a failure as a basis for an equally rationalized therapy, that one may be justified in disregarding the whole scheme, even at the risk of being numbered among the unscientific, in order to obtain the maximum number of cures.

DISCUSSION.

DR. THEOPHIL KLINGMANN: I was much interested in Dr. Marshall's paper. I take it that most

of his cases were without any definite neurologic condition. At least Dr. Marshall didn't mention such conditions. I dare say my experience is very limited in that class of cases.

It has been a great satisfaction to me, however, to observe the results in neurologic cases. Most patients with hysteria subjected to the isolation treatments suffer from constipation. It is usually the first request that they be given a cathartic under such circumstances, even on the first night. However, they are assured that that will all be taken care of and that first of all a careful examination of the condition will be necessary in order to give proper medication. These patients are much concerned for the first few days, of course, the cathartic is not forthcoming, and much to their surprise, they begin to have normal evacuations of the bowels, perhaps not every day at first, but very soon, and eventually they inform you voluntarily that the condition is much improved. That is the rule in the majority of cases where there is no organic cause for the constipation. Only recently I had an experience with a patient whom I had previously treated, and who had had trouble of that sort, but apparently was not cured of the hysteria, and consequently was not cured of the constipation. The case was one of a chronic type of years standing, and beyond the age where we usually get good results in such cases. I received a telegram from this patient from some point in Florida, stating that the condition was very serious with complete obstruction of the small bowel, and that she had taken croton oil without results. I wired her and told her what to do, ordering absolute rest in bed and discontinuance of all medication. I have just received an answer that she is much improved. Apparently in hysteria the condition is caused by the same circumstances as the other symptoms of which those patients complain.

I wonder if there is not in all of these cases some definite psychic cause and while Dr. Marshall has given us the results which he obtained years ago, with apparently no recurrence, it is probable that the psychic element is eliminated. Where the condition is not a neurosis, and the patient is a normal individual, the condition may be due to bad mental hygiene. In cases of hysteria, where the neurosis is not cured and there is a return of the other symptoms there is a return of the constipation, and finding the cause of the neurosis will eliminate all of the symptoms, and consequently, the constipation.

DR. HAROLD DEB. BARSS: There are one or two points of interest to me. In my experience in the Surgical Clinic as I have examined a number of cases who come for indefinite stomach or bowel trouble, upon questioning them I find that the ideas of constipation among laymen vary. A large number definitely state that they are constipated, and yet there is no evidence to bear out their statements. Just the other day I asked a patient if he was constipated and he said, "yes." I said, "How long have

you gone without a bowel movement? Have you ever skipped a day?" He answered, "Yes, I did once, and I got a headache." This man took a cathartic every night. Patients of such type should be very amenable to treatment. I think another point of importance which was brought out is that we must first convince ourselves that there is no organic basis for the trouble. If we have eliminated every possible chance for an organic basis for the trouble, I think psychotherapy is a very good curative agent. I have to my credit one successful cure of constipation by the method outlined by Dr. Marshall. This patient who formerly used cathartics in considerable quantities, has not used any within the last two or three years.

DR. JAMES G. VAN ZWALUWENBURG: I have for a long time been convinced that the X-ray findings and the patients' statements of the condition they are in often absolutely conflict. I doubt whether anyone knows whether he is constipated or not. I have reached a point where I don't know what constipation is. There must be some intoxication which arises from such a condition because I have experienced it. However, I refuse to state the habits of my bowels. I am not like a classmate of mine who claimed that his bowels moved regularly—every Friday morning. I believe that constipation is not of large bowel origin. However, I cannot with decency go any further since Dr. Marshall distinctly refuses to discuss the question of the entity of constipation. I merely want to express my appreciation of the presentation of the subject tonight.

DR. MARSHALL (closing the discussion): Dr. Klingmann's point is well taken in regard to constipation occurring as a feature of hysteria or some other neurosis. Of course in such a case, the neurosis is the thing which should be treated. I haven't any doubt but that some of the cases I have treated fall into that group, but it is not always convenient to treat the underlying condition scientifically any more than it is always feasible to perform a surgical operation for the underlying cause of constipation. The treatment after all is only a symptomatic form of treatment and is comparable to the symptomatic treatment of hysteria by the electric current rather than treating the patient by psychoanalysis, which eliminates the cause of the trouble. In all the cases with which I have come in contact, a large majority of them fall into the group which Dr. Barss mentioned, those patients who are not constipated at all, but only imagine they are.

The subject has been a very interesting one. I must admit that I have not treated a great many cases. In the cases in which I have taken up the treatment seriously, I have had no failures except the one which I have reported, in which there was a partial result. Many times I have used the method in cases that were being treated for other conditions in which constipation was incidental. In such cases there has been improvement but not a complete cure, because the treatment was not undertaken with proper care.

REPORT OF TWO CASES OF THYROID-ADENOMA OF THE POSTERIOR PHARYNX AND NOSE.

A. C. FURSTENBERG, M.D.

(From the Department of Otolaryngology, University Hospital, Ann Arbor, Michigan).

Thyroid metastasis to the upper respiratory tract is a very rare occurrence but not infrequently remarkable glandular tissues growing within the bones of the skeleton, resembling structurally young or growing thyroid gland have been encountered. From a pathologic viewpoint these tumors are thyroadenomas and structurally of a benign type, but clinically they are found to grow rapidly, eroding the bone and tissues in which they occur and manifesting malignant properties. It is, moreover, an interesting fact that metastasis has frequently occurred when a careful study of the thyroid gland itself has failed to show any evidence of a primary tumor. The metastatic focus may not only resemble the structure of normal thyroid but may also be capable of assuming the same function. In this connection Von Eiselsberg reported an interesting case in which symptoms of cachexia appeared followed the removal of a goiter but prompt improvement occurred with the appearance of a tumor in the sternum two years later. Because of symptoms of pressure it was necessary to remove the tumor and sternum four years later, following which, the patient developed cachexia and death finally occurred from marasmus.

As to the cause of the development of metastasis, according to Adami because of the distance of the bones affected from the thyroid it does not seem reasonable to advance the theory of fetal inclusion, that is, to suppose that we are dealing with cases in which, during fetal life, pieces of thyroid became detached and lodged in growing bone to lie dormant for years and suddenly take on an active growth. He has pointed out that there can be detected in the thyroid even during adult life small accumulations of cells called "mother cells" by Wolfer capable of growing and producing new acini. He believes, therefore, that the simplest explanation for metastasis is that certain of these cells gain entrance to the circulation and are carried through the organism to lodge in tissue favorable to their growth.

The case reports are as follows:

Mrs. H., age 45, entered the Hospital complaining of difficult nasal respiration. Her family and personal history were of no importance. Her present trouble began two years ago when she gradually became hoarse, suffered from pain in the right eye, and a few weeks later was seized with frequent attacks of epistaxis. She consulted her physician who removed a growth from the right nares following which nasal breathing became free but intermittent hemorrhages continued. Three months later it was necessary to submit to a second operation, the growth having returned and epistaxis more frequent. She remained under the constant care of a nose specialist for three months during which time was free from symptoms. The nasal obstruction and epistaxis, however, returned, the hemorrhages became alarming, she suffered extreme weakness from the loss of blood and was seized with repeated attacks of acute suppurative otitis media.

On entrance to the Hospital the following physical signs of importance were as follows: Patient had an exophthalmos more marked on the right than on the left. There was an enlargement of the right lobe of the thyroid. There was a distinct tremor of fine character in both hands. The heart action was rapid with a systolic murmur heard at the aortic area. Blood pressure 175. Hemoglobin 55 per cent. The eye examination was negative except for a slight edema of both discs and a proptosis of 21 in OD and 18 in OS. The patient was a typical mouth breather. The right side of the nose was found completely filled with a soft red spongy like tumor extending back into the nasopharynx. The left side was free from the tumor mass. A section of the neoplasm removed for pathologic examination was reported as follows: Tissue presents character of thyroid adenoma without colloid. Large hypertrophic cells line the follicles like those of exophthalmic thyroid. May be misplaced thyroid tissue or thyroid adenoma metastasis. Should be treated as a carcinoma.

Following this report the tumor mass was radically removed under cocaine and adrenalin and the nasal cavity firmly packed with gauze. The following day the packing was removed and during the following ten days that the patient remained in the Hospital, she enjoyed unobstructed nasal respiration and was free from hemorrhage.

The second case, Mrs. P., age 40, entered the Hospital complaining of difficult breathing and hoarseness. She was assigned to the Medical Out Patient Department where the following history was obtained.

Family and personal history of no importance. Present illness began in 1903 following childbirth at which time she noticed a hard tumor mass in the neck associated with a dry hacking cough. Since this time she has never been entirely free from the cough and the swelling in the neck has been slowly but progressively increasing in size. About six weeks ago she was seized with a severe attack of sore

throat associated with chills and fever, difficult respiration, painful and altered phonation and the expectoration of large quantities of mucopurulent secretion mixed with portions of membrane and streaked with bright red blood. Htr condition was diagnosed as diphtheria by her home physician and antitoxin administered. Since this attack she has noticed a progressively increasing dyspnea and marked alteration of voice. Physical examination in the Medical Clinic revealed a large bilateral goiter. The heart and lungs were negative. Blood pressure 170, systolic, 110 diastolic. Urine showed a trace of albumen. Wassermann negative. She was referred to the Department of Otolaryngology where examination of the throat revealed a large tumor mass of the posterior pharyngeal wall; the anterior convexity extending forward almost to the tip of the epiglottis. The tumor was covered by normal mucous membrane and showed no evidences of ulceration. On palpation it was hard and firm and presented no characteristics of fluctuation. The larynx showed congestion and infiltration of the vocal cords characteristic of a chronic laryngitis. There was no paralysis of the intrinsic laryngeal muscles. The X-ray plate showed an enormous swelling of the retropharyngeal tissues encroaching upon both the nasal and aural pharynx and extending from the level of the second cervical vertebra above downward to the level of the fourth cervical.

Because of the onset history of a severe pharyngitis immediately followed by the difficulty in respiration it was reasonable to assume that we were dealing with a retropharyngeal abscess even though the firm hard character of the mass on palpation failed to substantiate that diagnosis. The posterior pharyngeal wall was aspirated with the result that only a few drops of blood was obtained. The mass was incised at the inferior border when it was found that the knife had penetrated a large new growth. Hemorrhage was profuse. A small piece of tissue removed for pathologic examination was reported as thyroadenoma.

As to the treatment of thyroadenoma, it is the consensus of opinion among surgeons that the metastatic focus should be treated surgically by radical extirpation. Because of its clinical manifestations it is malignant and should be treated as one would treat a carcinoma. In the first case reported, radical removal of the tumor from the nose was possible. In the second case in which the tumor involved the posterior pharyngeal wall, its enormous size, its location and vascularity, made it inaccessible either by external operation, or by surgical interference through the mouth.

Because of the short time in which the patient has been under observation the report of the last case with reference to treatment is in-

complete. We hope to report the therapeutic measures used and results in a later communication to the Society.

DISCUSSION.

DR. JAMES G. VAN ZWALUWENBURG: Dr. Furstenberg, whether intentionally or inadvertently, failed to read what to me is the most interesting part of my report to him. That which is not so obvious about the plate is the fact that the atlas is very much reduced in height; that the head is extended on the neck so that the spinous process of the axis is very much nearer the occiput than ordinarily. Also I thought I could see some irregularities in the body of the axis. You will note this sharp projection, and also the wearing off of the corner below. My idea of this, taken in conjunction with the enormous mass of the tumor, is that this is a Pott's, and the enlarge-

ment was secondary to it. I think that if Dr. Furstenberg could look a little more deeply he would probably find that there is an involvement of the bony tissue as well as of the soft tissue of the neck. Personally I cannot see how the soft tissue alone could produce all of this disturbance. There must be destruction of the lateral body of the axis.

DR. FURSTENBURG (closing the discussion): From the fact that Dr. Van Zwaluwenburg has shown us a partialogic condition in the atlas, it may be assumed that the thyroid metastasis occurred first in the bone, because it is very rare that thyroid metastasis has occurred in the soft tissues of the body, but it is quite frequently found in the bones, especially the bones of the head, sternum, clavicle, and scapula. For this reason it may be possible that the metastasis occurred to the atlas, and then by extending downward, presented itself in the pharynx.

Phenalgin and Ammonol.—At the time that synthetic chemical drugs were coming into fame and when every manufacturer who launched a new headache mixture claimed to have achieved another triumph in synthetic chemistry, Ammonol and Phenalgin were born and duly christened with chemical formulas. However, one of the first reports of the Council on Pharmacy and Chemistry showed them to be mixtures composed of acetanilid, sodium, bicarbonate and ammonium carbonate. Since then the unwarranted claims made for these preparations have been exposed repeatedly, and the danger of the indiscriminate use of headache mixtures pointed out. Despite the exposure of the methods used in exploiting Ammonol and Phenalgin, one finds just as glaringly false statements made in the advertisements of Phenalgin today as were made in its unsavory past. This would seem to indicate either that physicians have short memories or that they are strangely indifferent to the welfare of their patients, to their own reputation, and to the good name of medicine. (*Jour. A.M.A.*, Feb. 2, 1918, p. 337).

Basy Bread.—This is an asserted obesity cure put out by the Doctors' Essential Food Company, Orange, N. J. The advertising claims are extravagant and typical of other obesity treatment literature. Analyses indicated that in composition Basy Bread was similar to graham bread. Basy Bread sells for \$1 a loaf. Dr. Wiley well sums up the case thus: "There is one way in which Basy Bread will reduce, that is, don't eat any of it nor much of it nor much of any other kind." (*Jour. A.M.A.*, Feb. 9, 1918, p. 407).

Absorption and Excretion of Mercury.—It may be regarded as clearly established that, in addition to the kidneys, the stomach may participate in this eliminatory function quite as well as the other portions of the alimentary tract. The occurrence of severe intoxications from the use of mercuric chloride in vaginal douches is likewise recognized. The absorp-

tion of mercury through the sound skin has been in dispute. To account for the efficacy of mercurial inunction, the contention has been made that the mercury thus applied is volatilized and absorbed through the lungs in greater part if not entirely. Experiments in the dermatologic laboratories of the Philadelphia Polyclinic leaves little doubt that the skin is an important, perhaps most important path of absorption of mercury applied by inunction. (*Jour. A.M.A.*, Feb. 9, 1918, p. 392).

Fellows' Syrup, and Other Preparations of the Hypophosphites.—An advertisement for Fellows' Syrup Reads: "Fellows' Syrup differs from other preparations of the hypophosphites. Leading clinicians in all parts of the world have long recognized this important fact. Have you? To insure results, prescribe the genuine prescription Syr. Hypophos. Comp. Fellows'. Reject cheap and inefficient substitutes. Reject preparations 'just as good.'" In truth, Fellows' Syrup is not like the better preparations of this type, since after standing it contains a muddy looking deposit that any pharmaceutical tyro would be ashamed of. Examination of the literature used in the exploitation of Fellows' Syrup fails to disclose any evidence to show that it has therapeutic value. Not only is there an entire absence of any evidence of its therapeutic value, but there is an abundance of evidence that the hypophosphites are devoid of any such therapeutic affects as they were formerly reputed to have, and that they are, so far as any effect based on their phosphorus content is concerned, singularly inert. As the result of its investigation of the therapeutic effects of the hypophosphites, the Council on Pharmacy and Chemistry concluded: There is no reliable evidence that they exert a physiologic effect: it has not been demonstrated that they influence any pathologic process; they are not "foods." If they are of any use, that use has never been discovered. (*Jour. A.M.A.*, Feb. 18, 1918, p. 478).

Sketch of Battle Creek and Camp Custer

The good ship "La Plata," on its regular voyage from Montevideo, had just rounded the Cape of Good Hope and was entering the harbor of Cape Town, South Africa. A young man stood by the rail on the hurricane deck, a marine glass to his eyes, scanning the coast line, harbor, shipping, and getting his first view of the city.

Suddenly he noticed what appeared to be a motor boat in distress. A man stood in the bow waving a piece of white cloth and he seemed to

exact location of Battle Creek. In fact, he'd been there for treatment; and he knew it was a long, long way for that disabled motor boat and its crew.

Later on the passenger was comfortably seated in the young man's cabin and was surprised to find that both had started for Battle Creek, and on the same mission. "My name is Roger Gibson and my present residence is in Flores, Buenos Ayres. I'm going up to Kimberley on business for a day or two, then return to Cape



Charles Willard Library.

be shouting for help. The young man called the attention of an officer, who also peered through the glass a moment, then hurried up on the bridge. The ship's course was changed and was soon within hailing distance of the small and disabled craft.

"What's the trouble?" shouted an officer through his megaphone.

"Engine's dead; boat's leaking! Been out all night!"

"Where were you bound for?"

"Battle Creek!"

That was enough. The officer knew the

Town and embark for New York and Battle Creek."

"And my name is Noel Byron. I am an Englishman, in business in Calcutta. My health has been poor for some time, and my wife insisted I should go to Battle Creek for treatment. And so it seems we may be chums on this trip. I'm a motor boat enthusiast, and a friend of mine in Cape Town offered me the use of his craft. But you can see it's a bum outfit from bow to stern."

And that is the way some people start for Battle Creek from all corners of the civilized

world. Some meet on the way, almost before they get fairly started, and get quite chummy over what they will see, do and hear, when they arrive at their destination. Others sit on the same seat, and sleep in the same cabin, all the way from Timbuctu or Vladivostok, and never

it. The city itself may not be any more attractive than some other resorts. It has no bathing beach and "board walk," like some seaport watering places, but it gives more baths to the square inch than almost any other inland bath town in the country.



City Hall, Soldiers' Monument and First M. E. Church.



Post Office and Soldiers' Monument.

get on good speaking terms, though both get off the same train at the great American "food city."

And so Battle Creek has quite a reputation, even to the uttermost parts of the earth. Advertising, and "delivering the goods," have done

It is a healthy place to live. Whether this is because of the Sanitarium; the immense food factories; and also, because there is a goodly bunch of high-grade physicians and surgeons driving motor cars daily on nearly every street in the city, accompanied by genuine leather

eases full of drugs and highly polished surgical instruments; or whether it is more or less in spite of all these things, we must leave to the coroner's jury and court of last resort.

The stranger entering Battle Creek these days is surprised to find such crowds around

looked after directly he lands at either railway station.

SANITARIUM.

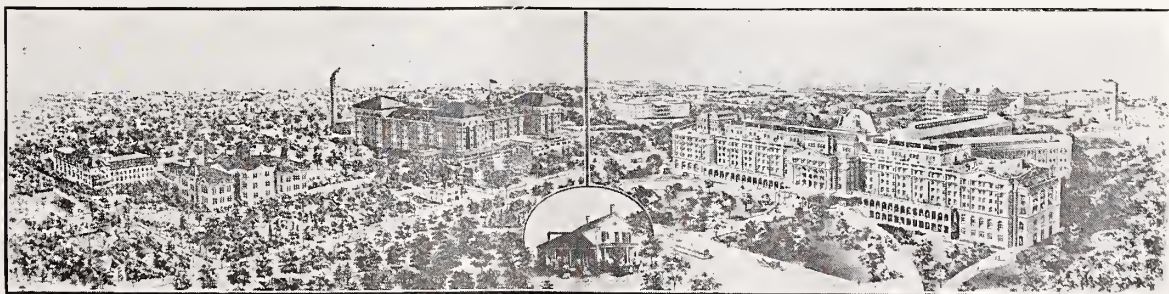
The visitor for the first time in the city always looks up the big Sanitarium. It occupies a commanding site on the big hill north-



Post Tavern, showing Bridge to Post Building. Headquarters.

the railway stations. Men in khaki uniforms are everywhere. Soldiers get off and get on every train and interurban car that enters the city, day and night. If you are going to the Sanitarium you will find runners and porters

west of the business section. The main building astonishes even those who have read the booklets of the institution and seen the many pictures illustrating the various departments, methods of treatment and bath equipment. The



Battle Creek Sanitarium, Annex and Laboratories and Hospital.

looking for you as soon as you step on the station platform. If you are a visitor, a tourist, on business, or if you rode in on the bumper of the blind baggage train, you will be properly received before you go many steps. Everybody who comes to Battle Creek these days is well

next inquiry is for Dr. Kellog. The man who has built up such a wonderful institution and equipment, and written so many books and articles on health and the human body, must be a big man, indeed. And so the visitor looks at every six-footer who wear his clothes like a

king, parts his hair in the middle, whose Prince Albert coat is black as midnight, shoes ditto, and who sports a big diamond; surely such a man must be the high chief boss of the whole plant.

But alas, and alack! and also how agreeably surprising is the discovery that Dr. Kellogg is more concentrated in form and bulk than had been imagined. And, instead of black being the color scheme of his exterior, everything from his hat to his shoe tips is white or old ivory. Even his overcoat is light color. Out in the deep snow the Doctor's camouflage suit

the largest in the world. Nichols & Shepard started before the Civil war, and are now doing more business than ever before. The Advance-Rumely plant covers many acres on the west side of the city, and manufacture a large variety of farm machinery, including light and heavy gas tractors and steam engines.

Over on the hill east of the business section stands a little old barn. It is nearly three-quarters of a century old, outlived its usefulness as a horse stable or hay loft, but it is under guard night and day, kept painted white, and is pointed out to visitors by good citizens



Nichols' Memorial Hospital with Roger Davis Annex.

would deceive even the old Kaiser's field glass fitted with a color screen.

INDUSTRIES.

The immense food factories attract the attention of the passengers on the incoming trains. The Postum Cereal and Kellogg's are the largest, run night and day the year round, and employ many hundreds of men, women and girls. The immaculate neatness of everything connected with the handling of materials and manufacture of foods ready to ship, surprises and pleases the visitor. Hardly a city or village in any civilized country on the globe but what has packages of these Battle Creek foods for sale in stores, hotels and restaurants.

The threshing machine factories are among

as one of the greatest things that ever happened to Battle Creek. In that old barn C. W. Post made up the first of his food and drink that has, in the years since then, walked and talked in the forms of millions of human beings over the entire civilized globe. What happened in that old barn has helped to build the wonderful Post Tavern, Post office building, Post Theater, Post garage, thousands of homes in the city, as well as the immense food manufacturing plant at Postumville. In other cities, and in other lands far distant, that little old barn and the owner thereof, has built up many thousands of acres of fine farms, business enterprises and country homes that are worth millions in coin of the realm.

One of the very first really successful steam

pumps was invented in Battle Creek. It was perfected and afterwards manufactured in a foundry and machine shop that later on developed into the American Steam Pump Company. And the many varieties of steam pumps manufactured by that company now are made on the same spot where one of the original pumps was made. Elon A. Marsh finally perfected the double acting pump, and Foster M. Metcalf worked out the first piston rings whereby the loss from leakage of steam pressure was largely obviated.

Battle Creek now is known all over the world as the leading steam pump city, and all sizes are made for any purpose desired. The business has grown by degrees until the three big factories of the city are behind their orders from far and near. The Union Steam Pump Company is located on the south side of the business section and is an immense plant. The company sends steam pumps into every country on the face of the earth. It has been crowded to its utmost capacity and obliged to add more buildings to house additional machinery, material and workmen. The Advance Pump and Compressor Company came into the field later on and has had all the business it could possibly handle. All three factories are prosperous and their business is constantly increasing.

The Duplex Printing Press Company flat-bed, rotary and tubular presses have been going into the large and small newspaper offices all over the civilized world. The idea started in Battle Creek about twenty-five years ago and the big factory makes a complete line covering the whole field of newspaper perfecting presses. The addition of the rotary machines has placed the presses in the big metropolitan newspaper plants of the largest cities in this country, Europe, Australia and Africa.

TRANSPORTATION.

No city between Detroit and Chicago has such good transportation facilities, being on the main line of the Michigan Central and Grand Trunk railways, both double track roads. And this was one of the important conditions considered in locating the Michigan-Wisconsin military cantonment at Battle Creek. The Michigan Railway electric interurban lines further perfect transportation in every direction from the city.

Automobile tourists coming into and passing through Battle Creek will find plenty of room for storage and repairs in the garages. One of the largest and finest in the state, and recently

completed, is the Post Tavern Garage. It will store over 150 cars. Others are the American Motor, Independent, Henry L. Phillips and United Motors Company, all of which have large storage for cars by the day or week.

GOVERNMENT.

Battle Creek is governed by a city commission and its present mayor is a laboring man. It has a large and magnificent city hall. Its fire department is called one of the best, for a city of 40,000 inhabitants, there is in the United States. All four fire stations are models of the kind and fully equipped with motor-powered fire-fighting vehicles of the latest and best



Masonic Temple.

design of construction. In no city are the runs of these fire machines to fires watched by larger and more admiring crowds along the business streets.

This city was one of the first to install ornamental lamp posts of large and attractive design, thickly planted along both sides of the main streets, with five large globe cluster electric lights atop each post. Four small flags are inserted in the upper frame work on special and patriotic occasions. At times during each growing season foliage and flowering plants grow in boxes underneath the lamps and beautify the entire street section, and instantly attract the admiration of visitors and passing motor car tourists.

PUBLIC BUILDINGS.

Numerous public buildings and churches have been built in recent years. The Masonic temple, Willard library, Methodist, Congregational and Catholic churches, and the recently completed Y. W. C. A. building, are large and fine structures and centrally located.

CAMP CUSTER.

But the greatest attractions in and around Battle Creek at present are the soldiers boys in their khaki uniforms. Camp Custer is but a short distance west of the city limits and contains over 2,000 separate structures, all built within four months' time.

Camp Custer cantonment barracks are built on the site of an old village called Harmonia. But a very few of the old structures were left when the cantonment started. The old church, the first Sunday following the report of the probable location of the Michigan-Wisconsin cantonment there, was filled with farmers of the village and neighborhood. They were opposed to having their farms taken away from them and voted to resist the invasion. The picture shows the old church and vehicles outside during this historical meeting, and the last one in the building. It has stood there for nearly three-quarters of a century. This structure was not demolished, like many others there-



Harmonia farmers meeting in their old church on first Sunday in June. Instead of a religious service, they met to vote against the Camp invasion.

abouts, and is now daily used as an automatic rifle school by the ordnance department.

About 1850 the village of Harmonia was started by a number of families on the level and high ground located about four miles west of the center of the present business section of Battle Creek. It was in those days referred to as the "Harmonia Community" and controlled by a bunch of Spiritualists and Quakers who had advanced, or stepped aside, from the reg-

ular beliefs and practices of members in good standing in both denominations. Some of the farmers in the surrounding neighborhood called it a "free love" community, and one of them said that, "On a clear day one could stand on the hill by the cemetery and count thirteen homes broken up by the community."

About 1854 Hiram Cornell started what was called the Bedford Harmonial Seminary. This stood at the northwest corner of Center and First streets, and was, by some of the early settlers reports, 100 x 200 feet, and four stories.



The exact center of the old Village of Harmonia. All disappeared except the barn on right side. The auto and tree stand on the site of the Harmonial Institute and the Dormitory.

high. The upper portion was demolished by a wind storm and it was later reroofed as a two-story building. The Cornells planned to make a great school for the boys and girls of their sect in this seminary and Harmonia was to be the national headquarters. Dr. Haskell came later from Illinois and joined the society. He laid out plans for a manual training school, the farms near by, now occupied by the many hundreds of army barracks, to be used for this development work. There is no doubt but that the first actual work in manual training in Michigan started in Harmonia. Across the street from the seminary was a large dormitory, later called "The Bandbox." At certain times there were from two to three hundred in attendance at the meetings and school, coming from all parts of the country and from "down east." When the village was platted there were 80 acres laid out in lots, and during the following ten years over fifty homes and farm houses were built. When the cantonment construction commenced nearly all the structures had disappeared. One picture shown herewith reveals the location of the seminary and dormitory where the automobile and tree stands. This Harmonia village center has all disappeared.

with the exception of the old barn at the right.

Many stories of this community could be told, but space forbids. Dissensions finally broke up the cult. Instead of being harmonious, as the name implied, there were jealousies and bitter quarrels, as was natural under such a form of life. At one time a prominent United States senator from New York suddenly disappeared from Washington, and was later found living in complete obscurity in Harmonia. Later on he died there, and it was some time before his family knew what had become of his body.

Sojourner Truth, one of the most noted colored women in the United States, was prevailed upon by some friends whom she knew in New York State, where she was born a slave, and later given her freedom, to go to Harmonia to live. She was never able to read or write, but was gifted with a highly developed spiritual nature, keen intelligence, aptness of expression and a style of eloquence that attracted instant attention whenever and wherever she spoke. During and after the Civil war she had a national reputation as a lecturer on temperance and anti-slavery topics, and was a warm personal friend of President Abraham Lincoln.

So Sojourner bought a lot in Harmonia and built a small one-story house thereon. She supposed she was getting in with some devoutly spiritual folks, but later found there was too much cat-and-dog fighting to suit her ideas of things. She slipped out at the first good opportunity and made her home in Battle Creek until she died at the age of nearly 100 years.



The Most Noted Rural School House in Michigan. In this room Camp Custer Soldiers are taught how to set up and operate a machine gun to kill the Germans.

After the seminary burned down a district school was built by the farmers and villagers who remained, and following the death or departure of the community cult, and this building has been saved by the federal government.

For nearly half a century farmer boys and girls attended this school, and the writer taught his first term therein. The house is well preserved, and probably is the only rural school room in Michigan that was ever used by the United States war department to give lessons in hand-



The last class to recite in the old school house was one of four boys of General Geo. Custer's Brigade.

ling and firing machine guns. The sign over the front door now reads "Machine Gun School. Ordnance Department."

The last civil class that recited in that old school house consisted of four old boys in Gen. Custer's old brigade. They are called the "Red necktie boys," and held their last annual convention in Battle Creek. The writer carried them in his car to see Camp Custer, where they were saluted by every soldier who met them in the camp. Then we took them over to this old school and lined them up on the floor in front of the blackboard. Each one had an old Sanders' Fourth Reader, of the vintage of 1860. While they were reading an old patriotic piece we took the accompanying picture. In the years to come this will be a noted historical scene, and of the few and rare ones of the early days of Camp Custer.

This old school house stands near the center circle of the camp and several buildings have been constructed near by. A fine farm house a few rods west is used as the home and official headquarters of the commanding general. Major General Parker is the third commander since the camp was organized. Near the circle and old school is the big theater, seating about 4,000. An immense gymnasium will be constructed this spring. The 125-foot flag staff stands in the center of the circle.

The Y huts of the Y. M. C. A., seven of them, furnish many of the little things associated with the home life the boys left behind.

In those buildings, always warm, and provided with writing material, reading matter, phonographs, games, stage and moving picture out-



Michigan-Wisconsin Y. M. C. A. officials in charge of Camp Custer and their Administration Building.

fits, there is always a crowd when the boys are not busy with the daily camp routine outside.



New Y. M. C. A. Home—just completed.

The large Y. M. C. A. auditorium seats over 3,000, and lectures, band concerts, drills, etc.



Going Over the Top into Camp Custer on the fine concrete asphalt road from Battle Creek.

are held nearly every evening in the week.

The concrete road from Battle Creek to

Camp Custer was completed just as winter set in. Outside the city limits the concrete is surfaced with asphalt. This road is lined with vehicles, going and coming, every minute almost, day and night. One or two more roads will be completed as soon as possible during the coming summer.



First View of Camp Custer to the boys going over the top into the Receiving Station.

The barracks section of the camp is located on the high and comparatively level ground. The east end thereof is rolling, and one picture shows the construction of the sleeping and dining barracks, two stories high, on the ground just as it originally laid. The company streets look rough and impassable in the picture, but have since been graded and graveled. The main street, the whole length of the camp, is of concrete. A drive in a motor car from the center



Camp Custer barracks under construction.

of the city to the extreme west end of the camp is over eight miles of the finest kind of pavement. The base hospital is located at the west end of the barracks section and on the shore of Eagle lake.

One picture shows a section of the hilly country on the north side of the camp. A better

location for an ideal battle ground could not be found anywhere. The view reminds the writer of one section of Gettysburg battle field.



Room is at a premium in the Y Huts some evenings. Boys use the floor to play games of checkers.

A typical picture, taken in one of the Y huts, shows how the recruits readily adapted themselves to their new surroundings. They gather in groups on the floor to play checkers when all the tables and benches are occupied. The boys are always delighted to have their pictures taken in any kind of a group or scene denoting action.

Camp Custer has accommodations for about 40,000 men. The barracks in time will be made

more permanent, provided compulsory military training is adopted by the government.

During the coming summer many hundreds



In a "Y Hut." Soldier boys anxious to have their pictures taken.

of thousands of friends and relatives of the soldiers, motor tourists, etc., will come to Battle Creek to visit the wonderful training camp, and it will be a revelation to all who see it for the first time. Its magnitude, quick construction, and the spectacle of recruits drilling on the hundreds of open spaces on the cantonment grounds, impresses the observer. For the first time many are thrilled and aroused to the highest degree of patriotism, and war and all its horrors are realized as never before.

Calhoun County Medical Society. Historical Sketch

CALHOUN COUNTY MEDICAL SOCIETY HISTORICAL SKETCH.

By W. H. Haughey, M.D.

Sometime during the year 1876 a group of earnest devoted medical men, fourteen in number, from Calhoun County, met at Albion, organized and formed what they named the Calhoun County Medical Association, thus they gave voice to their protest to the numerous isms, that at the time were rampant in the land and proclaimed to the public their faith and their confidence in the righteousness of scientific medicine.

Quackery by its blatant praise of self and loud condemnation of everything regular, had sown the seeds of doubt in the minds of many as to the value of the services of the less insistent and

more modest scientific practitioner, and a membership in the County Society not infrequently carried with it the loss of some practice and some fees.

Nevertheless those earnest patriotic men, confident in the justice of their cause and secure in the knowledge of right and their profession, stood faithfully by their Association guiding its infant progress through shoals and shallows, avoiding torrents and deeper pools where numerous earlier efforts had found untimely graves and now rested in unhallowed oblivion. Gradually the Association grew. The work of its members speaking for their ability. The rectitude of their lives gaining for them the confidence of the people, until soon a membership in the Calhoun County Medical Association not only secured for the individual entree to

professional circles, but established his position in society, integrity as a man and standing in the community.

Even so, all was not clear sailing. Dissensions from within and attacks from without were encountered, withstood, combated or ignored. The sparsely settled country and widely separated places of meeting rendered impossible frequent gatherings which no doubt marked for good and permanence of the Association because when they did meet those wise and determined founders stood resolutely by their scientific program, ignoring and frowning whenever possible upon all disturbing dissensions elements; thus were many grievances allowed to smoulder and die that better oxygenated would have resulted in an inextinguishable conflagration. But "The best laid schemes o' mice an' men, Gang aft a-gley," as time passed and older workers dropped out, their places were not always filled by those who possessed equal tolerance for human frailty and weakness. Meetings were not regularly held. Memberships lapsed until often when meetings were called scarcely a quorum would be present.

The Association now approaching its twentieth anniversary with its original or charter members all deceased or away, represented by a newer elements actuated by different ideas, was in the most critical period of its existence. The writer well remembers one meeting called at Albion when he was to read the paper, the sole one that formed the program for the occasion. Two doctors from Battle Creek accompanied him to discuss the subject, arrived at Albion; not another doctor from the entire county was present. The police of the town were requisitioned and sent out to rustle in an audience from the Albion profession. Result, one single representative from Albion was secured. To this audience of three the writer read his paper. We then adjourned, went out to a secluded spot on the river and went in swimming. This cooled us off sufficiently to return home and calmly think the matter over. The result of these cogitations was the formation of a local society in Battle Creek, The Battle Creek Academy of Medicine. Quite naturally Marshall and Albion followed suit and soon each had its Local Academy of Medicine; each independent of the other and of the County Association.

In this dilemma a meeting of the County Association was called to assemble in Battle Creek. At this meeting a bare quorum, mostly Battle Creek members were present and the

principal business transacted was to pass a resolution to disband the county organization and pin our faith to the Local Academies. Not being able to prevent this vote the writer voted in the affirmative and immediately offered a resolution to rescind and call a joint meeting of the chairmen and secretaries of the Local Academies to devise ways and means to continue the county organization.

At the meeting which followed, it was brought out that the Association had been organized



CHAS. E. STEWART, M.D., President.
Calhoun County Society.

just twenty years lacking two months. We at once determined to call a grand rally at Albion, celebrate the 20th anniversary with a big banquet and post-prandial program: have our wives and lady friends present and inspire new enthusiasm into the Association. All this without one dollar in the treasury to work on. To the writer fell the task of rounding up the charter members, have them or a report from them present, and to secure funds to defray all expenses. The latter, not a difficult task, as every one approached cheerfully pledged his

quota, but the rounding up of charter members require more effort. However all were accounted for. Half were dead. Of the other half two were at the banquet and the rest represented by personal letter or telegram. The Albion members, through the generosity of Dr. Frank Palmer, donated the banquet which was held at Dr. Palmer's residence and no one had to redeem his pledge.

The success of our program was so great that we determined to establish the banquet as an



A. F. KINGSLEY, M.D. Secretary,
Calhoun County Society.

annual affair and always have the ladies present. Our meetings now grew in interest and attendance. Large numbers responded to every call; new members were constantly added, and interest has never waned since.

Some new meeting places were added to our list and Ceresco became a favorable rendezvous for the June meeting. There enjoying the hospitality of our member, Dr. Gubbins, and the shade of the live oaks on his beautiful lawn, treated to a delectable feast prepared and served by the ardent villagers from the ambrosia of

the soil; lasting memories were implanted in the hearts of many who fervently wish long life and happiness not only to our member, Dr. Gubbins, who annually extended invitation, but to his co-entertainers, the villagers who by their willingness and their efforts contributed so generously to our pleasure as their guests, making of these meetings a memory that is good to keep with us.

At the time of reorganization of the State Society in 1902, the Calhoun County Medical Association comprised in its membership every eligible practitioner in the county and many from adjoining counties, being probably the best organized society in the state with a possible exception of two, Wayne and Kalamazoo. It was then in position to compete for and secure Charter No. 1, a great honor ardently coveted by several counties, notably Wayne who cheerfully, however, conceded it to Calhoun and acknowledged her right, because of her more prompt compliance with the requirements for securing charter. The name, The Calhoun County Medical Association now became The Calhoun County Medical Society to comply with the uniformity of names desired by the State Society.

In 1901 the Calhoun County Medical Association entertained the State Society at Battle Creek and maintained its record for rugged honesty by returning to the treasury of the State Society a residue of \$40.00 of the receipts from exhibitors after expenses of meeting and entertainments had been met.

The programs of the Calhoun County Medical Association were generally of high order and scientific worth. Before it on numerous occasions have appeared men of state and nation-wide reputation. Its members always took active interest and programs compared favorably in scientific value with those of other societies of the period. It has furnished from its members two presidents to the State Society, one secretary and editor of the *Journal* for a term of three years, and since the reorganization, the councilor for the 4th district, and the secretary of the council for the first ten years. It was two members of the Calhoun County Medical Association, Drs. Frank J. Otis and Newton G. Evans of the Battle Creek Sanitarium, who developed, described and demonstrated the Blastomycetes before a committee of the American Medical Association at New Orleans and received a \$500.00 prize from the American Medical Association for their contribution to scientific knowledge.

When the State Medical Society found it desirable to become incorporated it was a member of the Calhoun County Medical Society that was intrusted with that important work. Soon after which the County Society affected its own incorporation on April 30th, 1906, and has since transacted its affairs as an incorporated body.

After incorporation the affairs of the Society preceded without interruption, and the efficiency was improved. Quarterly meetings were the order with the fourth meeting of each year being the election of officers, and the event terminated with a banquet, to which function the ladies were invited.

In 1914 a need for more frequent meetings was felt and the holding of extra scientific meetings was tried out. This worked so satisfactorily that an amendment to the By-Laws was adopted, providing for monthly meetings except during July and August of each year, and this is the order at the present time. The time of meeting which had formerly been in the afternoon of each meeting day was changed to the evening, and increased attendance and interest have proven the wisdom of this change.

The Bulletin was launched as the official organ of the Society in April, 1914, and from that date has appeared regularly preceding each meeting to announce the program, and to carry items of interest to the members. At first the expense of the Bulletin was defrayed by the sale of advertising space, but soon it became necessary to use the entire space for ourselves, and for the past three years the expense of the Bulletin has been met from the general fund.

At the time of entrance of our Country into the present war the members of our Society were very prompt in responding to the call, and at present time we have had commissions to the number of sixteen awarded to members of our Society. Major James T. Case and Capt. Wilfrid Haughey are at the present time serving in France, while several other members are doing equally valiant service for their Country in other locations.

The Calhoun County Medical Society is particularly grateful for the opportunity to serve as host at this time, and pledges herself to put forth every effort to make the stay of her guests both pleasant and profitable.

Program of the 53d Annual Meeting of the Michigan State Medical Society at Battle Creek May 7-8-9, 1918

Meeting Place, Masonic Temple. Headquarters, The Tavern

THE COUNCIL.

Chairman—William T. Dodge, Big Rapids.
Secretary—Frederick C. Warnshuis, Grand Rapids.

MEETING.

Tuesday, May 7, 5:30 P. M.—The Tavern.
Wednesday, May 8, 12:00 M.—Masonic Temple
Thursday, May 9, 12:00 M.—Camp Custer.

HOUSE OF DELEGATES.

President—Andrew P. Biddle, Detroit.
Secretary—Frederick C. Warnshuis, Grand Rapids.

FIRST SESSION.

Tuesday, May 7th. The Bridge—The Tavern.
Time: 7:45 P. M. Sharp.

ORDER OF BUSINESS:

1. Call to order.
2. Roll call.

3. Reading minutes of last meeting.
4. Report of the Council.

W. T. Dodge, Chairman.

5. Report of Committee on Legislation and Public Policy. A. M. Hume, Owosso.
6. Report of Committee on Medical Education. A. M. Barrett, Ann Arbor.
7. Report of Delegates to American Medical Association. Guy L. Connor, Detroit.
8. Report of Committee on Venereal Prophylaxis. H. W. Plaggemeyer, Detroit.
9. Report of Committee on Tuberculosis.

A. F. Fischer, Hancock.

10. Report of Committee on Public Health Legislation. John L. Burkhart, Big Rapids.
11. Report of Committee on Civic and Industrial Relations.

Reuben Peterson, Ann Arbor.

12. Election of Committee on Nominations. The duty of this Committee is to nominate: (a). First, Second, Third and Fourth Vice-Presidents.

(b). Three Delegates and Alternate Delegates to American Medical Ass'n.

(c). Councillors for:

2d District—A. E. Bulson—Term expires.

4th District—A. H. Rockwell—Term expires.

5th District—W. J. DuBois—Term expires.

7th District—W. J. Kay—Term expires.

8th District—A. L. Seeley—Term expires.

9th District—B. H. McMullen—Term expires.

10th District—C. H. Baker—Term expires.

12th District—R. S. Buckland—Term expires.

14th District—C. T. Southworth—Term expires.

(d). To select place for 1919 Annual Meeting.

(No two members on the nominating committee shall be from the same Councilor District.)

13. Appointment of Business Committee.
By the President.

14. New Business.

SECOND SESSION.

Masonic Temple, Wednesday Morning, May 8th,
8:00 A. M. Sharp.

1. Roll call.
2. Reading minutes.
3. Report of Committees.
 - (a). Business.
 - (b). Appointed Committees.
 - (c). Committee on Nominations.
4. Election of Nominees.
5. Unfinished Business.
6. Miscellaneous Business.
7. Adjournment *Sine Die*.

HOUSE OF DELEGATES.

Delegates and Alternates.

NOTE—The black-face type that of the Delegate; the light-face type that of the Alternate.

ALPENA—Branch No. 48

E. E. McKnight, Alpena.

J. D. Dunlop, Alpena.

ANTRIM-CHARLEVOIX-EMMET— Branch No. 41

BARRY—Branch No. 26

BAY-ARENAC—IOSCO—Branch No. 4

W. G. Kelly and J. C. Grosjean, both Bay City.
J. McLurg and C. H. Baker, both Bay City.

BENZIE—Branch No. 59

BERRIEN—Branch No. 50

BRANCH—Branch No. 9

W. S. Shipp, Battle Creek, and G. B. Gesner,
D. H. Wood, Coldwater.

CALHOUN—Branch No. 1

W. L. Godfrey, Battle Creek, and E. L. Parmeter,
Albion.

W. H. Baldwin, Coldwater.
Marshall.

CASS—Branch No. 36

CHEBOYGAN—Branch No. 58

CHIPPEWA-LUCE-MACKINAW—Branch No. 35

CLINTON—Branch No. 39

J. E. Taylor, Ovid.

H. D. Squair, St. Johns.

DELTA—Branch No. 38

DICKINSON-IRON—Branch No. 56

EATON—Branch No. 10

F. J. Knight, Charlotte.

J. D. McEachran, Vermontville.

GENESEE—Branch No. 24

J. C. Benson, Flint.

C. H. O'Neil, Flint.

GOGEBIC—Branch No. 52

L. O. Houghten, Ironwood.

W. E. Tew, Bessimer.

GRAND-TRAVERSE-LEELANAU—Branch No. 18

G. M. Johnson, Traverse City.

GRATIOT-ISABELLA-CLARE—Branch No. 25

S. E. Gardiner, Mt. Pleasant.

C. T. Pankhurst, North Star.

HILLSDALE—Branch No. 3

HOUGHTON-BARAGA-KEWEENAW— Branch No. 7

W. H. Dodge, Hancock.

J. E. Scallon, Hancock.

HURON—Branch No. 47

S. B. Young, Caseville.

INGHAM—Branch No. 40

Freeman A. Jones, Lansing.

O. H. Freeland, Mason.

IONIA—Branch No. 16**JACKSON—Branch No. 27**

G. A. Seybold, Jackson.

M. S. Vaughan, Jackson.

**KALAMAZOO-VAN BUREN-ALLEGAN—
Branch No. 64****KENT—Branch No. 49**

J. D. Brook, Grandville.

C. C. Slemons, Grand Rapids.

H. J. Pyle, Grand Rapids.

W. H. Veenboer, Grand Rapids.

C. W. Brayman, Cedar Springs.

A. Nyland, Grand Rapids.

LAPEER—Branch No. 23

Dr. Chester, Emmett.

Dr. Heavenrich, Port Huron.

LENAWEE—Branch No. 51**LIVINGSTON—Branch No. 6****MACOMB—Branch No. 48****MANISTEE—Branch No. 19****MARQUETTE-ALGER—Branch No. 28**

A. W. Hornbogen, Marquette.

R. A. Burke, Diorite.

MASON—Branch No. 17**MECOSTA—Branch No. 8**

J. B. Campbell, Stanwood.

B. F. Franklin, Millbrook.

MENOMINEE—Branch No. 55**MIDLAND—Branch No. 43****MONROE—Branch No. 15**

V. Sisung, Monroe.

W. F. Acker, Monroe.

MONTCALM—Branch No. 13**MUSKEGON—Branch No. 61**

F. B. Marshall, Muskegon.

J. M. J. Hotvedt, Muskegon.

NEWAYGO—Branch No. 50**OAKLAND—Branch No. 3****OCEANA—Branch No. 67****O. M. C. O. R. O.—Branch No. 11****ONTONAGON—Branch No. 66****OSCEOLA-LAKE—Branch No. 30****OTTAWA—Branch No. 32**

J. J. Mersen, Holland

J. DePree, Zeeland.

PRESQUE ISLE—Branch No. 63**SAGINAW—Branch No. 14**

T. M. Williamson, Saginaw.

M. D. Ryan, Saginaw.

SANILAC—Branch No. 20

J. F. Waltz, Brown City.

W. G. Campbell, Brown City.

SCHOOLCRAFT—Branch No. 57

D. W. Ross, Manistique.

E. R. Wescott, Manistique.

SHIAWASSEE—Branch No. 33

W. E. Ward, Owosso.

ST. CLAIR—Branch No. 45**ST. JOSEPH—Branch No. 29****TRI COUNTY—Branch No. 62****TUSCOLA—Branch No. 44****WASHTENAW—Branch No. 42****WAYNE—Branch No. 2**

R. C. Andries, Detroit.

James A. MacMillan, Detroit.

Frank A. Starkey, Detroit.
 James E. Davis, Detroit.
 A. W. Ives, Detroit
 George C. Chene, Detroit.
 Joseph H. Andries, Detroit.
 Harry Pepper, Detroit.
 R. C. Clark, Detroit.
 R. C. Jamieson, Detroit.
 R. E. Loucks, Detroit.
 Harold Wilson, Detroit.
 Walter J. Wilson, Jr., Detroit.
 James Cleland, Jr., Detroit.
 Leonard F. C. Wendt, Detroit.
 Charles D. Aaron, Detroit.
 C. E. Simpson, Detroit.
 Frank B. MacMullen, Detroit.
 G. W. Wagner, Detroit.
 J. W. Cunningham, Detroit.
 C. H. Stiles, Detroit.
 C. D. Brooks, Detroit.
 John T. Watkins, Detroit.
 D. M. Campbell, Detroit.
 W. A. Defnet, Detroit.
 Wm. C. Lawrence, Detroit.
 Harry E. Dibble, Detroit.
 David Inglis, Detroit.
 Rollin H. Stevens, Detroit.
 Worth Ross, Detroit.
 H. Wellington Yates, Detroit.
 Guy Connor, Detroit.

GENERAL MEETING

Masonic Temple Auditorium, Wednesday, May
 8th at 9:45 A. M.

President—Andrew P. Biddle, Detroit.

Secretary—Fred'k C. Warnshuis, Grand Rapids.

1. Call to Order.

2. Invocation.

F. H. Clapp, Pastor

First Methodist Church, Battle Creek.

3. Address of Welcome.

Mr. W. J. Smith, Battle Creek.

4. Address of Welcome.

Charles E. Stewart, Battle Creek,

President Calhoun County Medical Society.

5. Response.

President, Andrew P. Biddle, Detroit.

6. Report of House of Delegates and Announcements.

The Secretary.

7. President's Annual Address.

Andrew P. Biddle, Detroit.

8. Address. (To be announced).

9. Address. (To be announced).

10. Miscellaneous Business.

11. Nominations for President 1918-19.

13. Adjournment.

SECOND SESSION.

Camp Custer, Mess Tent, 12 M.

1. Report of House of Delegates.

The Secretary.

2. Announcement of Ballot for President.

3. Introduction of President 1918-19.

4. Resolutions.

5. Adjournment *Sine Die*.

PATRIOTIC MEETING

Opera House, Wednesday Evening, May 8th,
 7:00 P. M.

ADMISSION BY RESERVED TICKETS ONLY

1. Band Concert—7 to 8 P. M.—Camp Custer
 Military Band—100 Pieces.

2. The Star Spangled Banner.

Audience and Band.

3. Convocational.

President Andrew P. Biddle.

4. "The National Cantonment."

General Kennedy, Commander Camp Custer

5. "Camp Custer."

Lt.-Col. C. J. Bartlett,

Division Surgeon, Camp Custer.

6. "Nine Months with our Boys in France."

Rev. Alfred W. Wishart, Grand Rapids.

7. "Experiences with Medical Officers in France
 and Italy." (Lantern slides).

James W. Inches, M.D., Detroit.

8. "On Duty Overseas."

(Speaker to be announced).

9. Adjournment.

SECTION MEETINGS.

General Note: All the Sections will meet in the
 Masonic Temple. Meetings convene at 1:30
 p. m. Section meetings will be held only on

Wednesday Afternoon.

SECTION PROGRAMS.

SECTION ON GENERAL MEDICINE.

Wednesday Afternoon, May 8, 1918, at 1:45 P. M.

Chairman—Walter J. Wilson, Jr. Detroit.

Secretary—W. H. Enders, Jackson.

1. Chairman's Address.

Diseases of the Aorta. (Illustrated by lantern
 slides).

Dr. Walter J. Wilson, Detroit.

a. Aortic Stenosis.

b. Aortic Regurgitation, Specific and Non-Specific

c. Aortitis, Specific and Non-specific.

d. Aortic Aneurysm.

2. The Clinical Application of Electrocardiography.
Dr. George E. Fahr, Ann Arbor.
3. Treatment of Nephritis.

Dr. Jas. H. Dempster, Detroit.

- a. The Importance of Diet—low protein.
- b. Uselessness of Diuretic Drugs.
- c. Treatment of Acidosis.

4. Early Diagnosis of Tuberculosis.

Dr. J. L. Chester, Emmett.

5. Diagnosis and Complications of Typhoid Fever.
Dr. E. W. Haass, Detroit.

- a. Diagnosis and complications of typhoid fever.
- b. The Clinic.
- c. Value of laboratory aid, especially Widal reaction, blood counts and cultures.
- d. In differential diagnosis most difficulty is encountered from colon infections, acute miliary tuberculosis, malignant endocarditis and meningitis, and rarely from genuine influenza.
- e. The differentiation of typhoid from the paratyphoid groups is of value from the standpoint of prognosis.
- f. Most important complications are those of perforation hemorrhage and gall-bladder infection.

6. Organization of a City Health Department.

Dr. C. G. Parnall, Jackson.

7. Pathology of the Common Diseases of the Cord.
(Lantern demonstration).

Dr. Frank R. Starkey, Detroit.

8. Lipodystrophia Progressiva.

Dr. Blanch N. Epler, Kalamazoo.

- a. Rarity.
- b. Pathology.
- c. Clinical Consideration.
- d. Differentiation.
- e. Etiology.
- f. Prognosis.
- g. Treatment.

9. Fragilitas Ossium, with Report of Three Cases

Dr. Frank L. Rose, Jackson.

- a. A rare disease. Synonyms.
- b. Distinguished from rickets osteo-malacia and osteogenesis imperfecta.
- c. Paucity of literature.
- d. Report of 3 cases in one family. Other cases in collateral branches of same family.
- e. It's pathology and etiology not well established. Suggestion of thymus gland as a possible etiologic factor.

SECTION ON SURGERY

Monday, May 8, 1918, at 1:45 P. M.

Chairman—A. W. Blain, Detroit.

Secretary—J. C. Andries, Detroit.

1. Chairman's Address—Group Medicine.
Alexander W. Blain, M.D., F. A. C. S., Detroit.
2. Surgery of the Stomach.
William J. Cassidy, M.D., F. A. C. S., Detroit.
3. Surgical Diseases of the Knee Joint.
Raymond C. Andries, M.D., F.A.C.S., Detroit.
4. Surgical Technique of Goiter Operations.
Max Ballin, M.D., F.A.C.S., Detroit.
5. The Acute Abdomen.
F. Gregory Connell, M.D., F.A.C.S., Oshkosh
6. Extravasation of Urine.
William E. Keane, M.D., F.A.C.S., Detroit.
7. Case Reports.
 1. Primary Carcinoma of Kidney.

2. Total destruction of the Kidney with Sinus Formation, continuous from the Ureter to the Epidermis.

James E. Davis, M.D., F.A.C.S., Detroit.

8. Announce subject later.

Willet J. Herrington, M.D., F.A.C.S., Bad Axe.

SECTION ON GYNECOLOGY.

Wednesday Afternoon, May 8, 1918, at 1:45 P. M.

Chairman—H. W. Hewitt, Detroit.

Secretary—H. J. Vandenberg, Grand Rapids.

1. My Experience in Cesarean Section.

J. Clarence Webster, M.D., F.A.C.S.,

Chicago, Ill.

Discussion—W. P. Manton, M.D., F.A.C.S.,

Detroit, Mich

2. The Improper Treatment of Abortion.

James E. Davis, M.D., Detroit.

Discussion—Major Reuben Peterson, Ann Arbor

3. The Test of Labor.

George Kamperman, M.D., F.A.C.S., Detroit.

4. The Surgical Treatment of Procidencia Uteri.
Lantern slide demonstration.

Hugh Hagerty, M.D., F.A.C.S., Detroit.

5. Radiotherapy and Gynecology.

G. E. Pfahler, M.D., F.A.C.S., Philadelphia,

Discussion—Henry Hulst, M. D., Grand Rapids.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY.

Wednesday Afternoon, May 8, 1918, at 1:45 P. M.

Chairman—Geo. E. Frothingham, Detroit.

Secretary—Ferris N. Smith, Grand Rapids.

1. Fractures of the Skull Involving the Ear and Accessory Sinuses—with slides

Dr. Wm. Cassidy, Detroit.

2. Diseases of the Accessory Nasal Sinuses with Original Slide Demonstrations.

Dr. J. W. Murphy, Cincinnati, Ohio.

4. Eye Paper. (Subject to be announced).

Major Harry S. Gradle, M. R. C.

5. War Surgery of the Head, Neck and Chest with slides.

Dr. H. M. Richter, Chicago, Ill.

Thursday, May 9, 1918.

A DAY AT CAMP CUSTER.

U. S. Army Cantonment.

Lt.-Col. C. J. Bartlett—Division Surgeon.

Major Lewis Wine Bremerman—Commander
310th Sanitary Train.

(Major Bremerman has been detailed by Lt.-Col. Bartlett to act as Director for the day).

I.

8:15 a. m.

By automobile from Battle Creek to Regimental Infirmarys. Eight miles ride giving birds-eye view of entire Camp. Automobile fare, 25 cents.

II.

8:45 a. m.—Sick Call.

By special arrangement the regular morning Sick Call will be delayed till 8:45 a. m. Demonstration will be given of method of examining and disposing of those who answer Sick Call.

III.

10:15 a. m.—Clinical Demonstrations.

1. Medical Clinic.
2. Surgical Clinic.
3. Eye, ear, nose and throat Clinic.
4. Benito-Urinary Clinic.

Medical Officers in command of these services will conduct a Clinic and Demonstration together with brief talks by various detailed officers, and the exhibition of cases.

Important. Inasmuch as a single clinic will accommodate only a certain number the attendance at these clinics will be limited and apportioned. **No one will be admitted to any clinic who does not hold a ticket.** Tickets to be secured at Registration Booth in Masonic Temple. Be sure and secure your ticket when you register.

IV.

12:15—Mess Call.

A splendid chance to sample Camp rations.

V.

1:30 p. m.—Division Review.

The Commanding General, as a special favor to the Society, will hold a Division Review. The full Camp force of some 30,000 men will draw up for formal inspection and review. The review will occupy some two hours and will be a wonderful inspiring Military Maneuver.

VI.

3:30 p. m.—Sanitary Corp Exhibition.

Under Direction of Major Lewis Wine Bremerman the Ambulance Companies and Field Hospital Companies will give a field demonstration. This will consist of:

1. Setting Field Hospital.
2. Evacuation Hospital.
3. Stretcher Bearers Bringing in Wounded.
4. Receiving of Wounded
5. Disposal of Wounded.
6. Military Drills.
7. Transportation.
8. First Aid.
9. Keeping Records.

VII.

5:30 p. m.—Retreat.

Special Note. We wish to impress our members with the fact that this is a Military Day and every feature will be conducted with Military precision and formality. Rigid observance of Military Methods will prevail. There is going

to be a snap to every feature that will of necessity compell our prompt compliance with every camp regulation. There can be no special favors shown to anyone. Please do not cause embarrassment to any officer by asking for special privileges. Members must remember that by special favor of the Camp Commander and the Division Surgeon the Society is extended the courtesy of visiting the camp and witnessing these demonstrations. The regular routine of camp life is changed for our benefit and pleasure. We are indeed under deep obligation to these officers.

When Retreat is sounded please depart from camp as speedily as possible. Do not attempt to stroll through the company barracks. You might encounter a Military Police.

COMMITTEES.**Calhoun County Society Committees.****General Arrangements.**

Dr. B. N. Colver, Chairman.
Dr. A. F. Kingsley (Chairman on Publicity).
Dr. R. C. Stone (Chairman Hotel Arrangements).
Dr. H. R. Allen (Chairman of Com. on Exhibits).
Dr. E. L. Eggleston (Chairman on Reception).
Dr. R. D. Sleight (Chairman on Entertainment).
Dr. C. S. Gorsline (Chairman of Finance Com.).

Hotel Accommodations.

Dr. R. C. Stone (Chairman). Dr. W. S. Shipp.
Dr. J. A. Elliott, Dr. R. D. Sleight.

Publicity.

Dr. A. F. Kingsley (Chairman). Dr. J. G. Gage.
Dr. L. E. Stegman.

Exhibits.

Dr. H. R. Allen (Chairman). Dr. A. F. Kingsley.

Finance.

Dr. C. S. Gorsline (Chairman). Dr. R. D. Sleight. Dr. R. V. Gallagher.

Entertainment.

Dr. R. D. Sleight (Chairman). Dr. J. A. Elliott.
Dr. A. S. Kimball, Dr. R. C. Stone. Dr. S. K. Church.

Reception

Dr. E. L. Eggleston (Chairman). Dr. J. G. Gage, Dr. J. W. Gething, Dr. W. L. Godfrey, Dr. J. S. Pritchard, Dr. Estella Norman.

GARAGES.

Post Tavern Garage will arrange to store 40 cars; storage, 75 cents per night; washing \$1.50 to \$2.00.

Phillips Garage will arrange to store 25 or more cars; storage, 50 cents per night, washing, \$1.00 to \$2.00

Independent Garage will arrange to store 50 cars; storage, 75 cents per night; washing, \$1.50 to \$2.50.

American Motor Co. will arrange to store 10 cars; storage, 75 cents per night; washing, \$1.50.

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Arthur M. Hume, Chairman.....Owosso
 Guy L. KieferDetroit
 W. J. Kay.....Lapeer
 W. J. DuBois.....Grand Rapids

EDITOR

FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
 Grand Rapids, Mich.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

April

Editorials

END RESULTS IN SURGERY.

It is a frequent matter of regret on the part of the surgeon that the relation between definite pathologic conditions and the symptoms described by a patient is not a more definite one. Incompetent a man must certainly be, if, when a person comes to showing clear signs of distress and debility, he can not find some organic weakness that could possibly give rise to the unpleasant sensations felt. It is an entirely different matter, however, to promise the patient that an operative procedure will restore him to perfect health even when the surgeon can be certain that the operation will correct the morbid anatomy. This is the *pons asinorum* which only the wise may cross. All the years and training to master operative technic and all the natural dexterity and aptitude a surgeon has avail nothing unless he can assure the most of his patients of results that are worth the money, time and suffering spent.

When considered simply as a means of correcting the morbid anatomy discovered few operations are a failure. The public everywhere delights in the quip, "The operation was a success but the patient died." The editor of the *Journal-Lancet* has recently directed a well justified criticism against the surgeons who in their zeal to use the knife attack every case

where there is a possible indication of pathological condition that can be corrected by an operation regardless of whether or not the pathology is the chief exciting cause of the symptoms and even in cases where the abnormality produces no symptoms.

It is a fact, which while sadly deplorable, is nevertheless true, that there exists among the laity a wide spread suspicion of operations. Any practitioner will admit that a great number of persons for whom he advises operation refuse to submit to it and that in the majority of instances it is only when the symptoms become so distressing or threatening that they feel something must be done that they decide to take a chance on an operation. Can any surgeon forget how often he has carefully explained all the facts of a case and earnestly beseeched a patient to do something before it became too late only to meet with incredulity and a horror of the operating table that was greater than the dread of the disease. A fact highly significant in this connection is an Act recently passed by the Legislature of a western state requiring every surgeon to submit the pathological specimen of each operation to the State Laboratory and provides that the surgeon shall only receive compensation in those cases where the specimen shows evidence of disease. While such a measure appears extremely ridiculous so far as it serves to accomplish the end sought, it, nevertheless, illustrates the attitude of the public in communities where the opportunities have been greater for ruthless exploitation and reckless diagnoses.

What, then must be done if we are to convince the hundreds of thousands of individuals in this country who are now leading inefficient and in many cases miserable lives, that a surgical operation will restore them to health?

We must first recognize that under the present system we have no adequate method of checking up the end results of one surgeon's operations for the sake of comparison with another. Indeed, it is doubtful whether many surgeons carry out a definite follow up system by which they, themselves, know what percentage of their cases produce satisfactory results to the patient. It follows from this that the standing a surgeon has must depend largely upon the influence he can command and the personal impression he makes upon his patients and colleagues. Thus, it is that a man of dominating personality and aggressive energy though mediocre surgical ability may hold a leading place while another with the genius of

a Pare because he comes from small, obscure college or because he has never attracted the patronage of the trustee of a large hospital must limit the exercise of his talents to a small general clientele. Within the profession many abuses arise such as favoritism in making appointments, wire pulling, and petty politics. The public having no accurate criterion to judge the merit of a surgeon's work accept his recommendations according to its credulity in his honor and judgment. To rely on unreasoning credulity is to place surgery in the same relation to the public and to permit the same practices of humbug and exploitation to flourish under its name as that of chiropractic and other quackery. To keep up the fiction that all surgeons are honorable and capable is silly. The temptation is too great to be otherwise. The wonder is that the profession maintains in its greatest part the idealistic character that it has.

There is only one way to ascertain the definite therapeutic value of an operation and the skill of the operator and that is to check up his results. If you as an operator tell me that you can cure me of my symptoms by an operation I may reply that I know of a man who was operated on a year ago who was in the same condition and is no better now. Do you think I am going to take your word for it that that was only a very rare mistake, that may be it wasn't a mistake at all and that something developed subsequent to the operation, or any other excuse you could make. The quack could make the same defense and is as often believed. On the other hand, if you can confront me with actual follow up records and show me that you do produce results, I would know how reliable your work was. "By their fruits ye shall know them."

This is the system that A. E. Codman has so warmly advocated. It is the only system by which a closed hospital service can justify its existence. It puts surgery on a square basis before the public, the same basis that any concern asks for, viz., on the value of its product. It will eliminate the charlatan, who having gained a certain degree of popularity proceeds to cut and slash whoever will pay him while the getting is good; it will do away with the incompetent and careless who are permitted to operate by virtue of the degrees they hold and because of what they know rather than through a display of diagnostic acumen.

What doctor would be so absurd as to buy a machine simply on the salesman's claim to respectability or the assumed popularity of the

machine without ever considering the actual merits of the machine and the kind of work it performs. Nevertheless, this is the very thing that the surgeon is constantly asking of his patients. We believe that surgery has enough merit and that diagnosis can be made sufficiently accurate to permit the profession to take the public into its confidence and that the mistakes that are now being made will not be made, will be largely done away with, when more surgeons make it the practice of following up their cases after operation and ascertaining the end results.

"Discipuli."

GERMAN INTRIGUE.

Gradually as events unfold themselves, as we delve into the past and dissect out the reason and cause for this or that event, or circumstance there comes to us a new, broader and deeper insight—there is unfolded before us an introspection of German atrocities not only in Belgium but in our very midst.

Sufficient substantial and reliable evidence is now presented to cause each and every patriotic and loyal citizen of this wonderful country of ours to conclude and determine that as far as present German government and Kaiserism is concerned that its complete overthrow and wiping out of existence is an absolute, positive necessity. That each and everyone of us must do his part to achieve that purpose.

Just at present there are three distinct avenues along which we as physicians may exercise our greatest influence: Enlisting and entering active service; purchasing Liberty Bonds and War Saving Stamps and the detecting and apprehending of German spies and alien enemies.

We must, to our financial limit, purchase all the Liberty Bonds and War Saving Stamps that we possibly can. We must urge those with whom we come in contact to do likewise. Every penny that can be spared must be put to purchasing these government securities. Having done that, providing active service is denied one, we must aid in the apprehension of the spy and alien enemy.

These spies are active in Michigan, right in our midst. We have personally come in contact with that fact in recent weeks and know whereof we speak. German intrigue is at our very door and German machination in Michigan is seeking to sacrifice the lives of our fellow members who are on duty.

As physicians we come in contact with all classes of individuals. We enter into the privacy of many lives and homes. We see and hear many things. The very nature of our work enables us to learn and see many things that would be long in reaching officials. It becomes then our duty to take note, record and report every suspicious act or conversation to the proper authority. A certain act or statement may arouse suspicion but be in itself not incriminating. Nevertheless that very act or statement may be sufficient to serve as a connecting link and cause the apprehension of traitors and spies. We are personally familiar with one instance where a seeming unimportant conversation in a dining car, when reported to those in authority, paved the right way to the arrest of three spies and alien enemies who were actively at work for German interests. We could go on and cite numerous similar incidents that would reveal the apprehension of an enemy spy by the information that came in piecemeal from several sources.

We therefor urge that everyone of our 2,600 members become alert to the situation, note every fragment of conversation, act or movement that may have an element of mystery or suspicion connected with it. Promptly report it to your representative of the Department of Justice in your community. They will hold it in confidence and institute prompt investigation. Should there be no representative of the Department of Justice in your locality then send it to the Editor of *The Journal*. He will personally see that it reaches the proper official. We want every member to thus be constantly alert and do his duty in making Michigan too warm for our country's enemies.

Personally, we have but little patience with these traitors. In our opinion there is but one punishment that is to be meted out to them. That one sentence even becomes insufficient when one learns authentically of the atrocities that have been perpetrated by Germany, German soldiers and spies.

The story is told that when Sheridan was defeated, Grant noticed a young man who was chuckling over Sheridan's defeat. "I have three armies" says Grant, "Sherman's, Sheridan's and my own and this young man rejoices at the defeat of Sheridan, he must inwardly hope for my defeat. He must be a spy. Take him, try him and punish him if he is a spy." The young man was arrested at night, tried at midnight and shot for a spy at daybreak.

Today three armies stand between us and the

Hun. They are the armies of Petain, Haig and Pershing. The man who stands on the corner, in his home, or midst his friends and rails against England or who hopes England will be smashed, or who rejoices in French or English reverses is secretly hoping America will be smashed. He should be arrested, tried at midnight and shot at day break for a traitor to this country.

Doctors of Michigan we ask you to aid in the apprehension of all traitors.

NEW STANDARDS—NEW MODES OF LIFE.

It must be apparent to one who has pondered upon the subject that when peace is finally declared, when our men again return to their home surroundings the standards for professional efficiency, ability and service will be greatly changed, higher qualifications will be expected and new conditions governing our services will be demanded.

Our soldiers, on dismissal, will not revert back to their old ways of living—they will have acquired a new mode of living, a new viewpoint, a new and greatly changed relationship to their families and communal neighbors. The old ways will be forever discarded; the old order will have passed. They will demand revamped systems, to apply to their community. of their army experiences and they will seek to secure them for their families and friends.

The ex-soldier, or war veteran will be conversant with the standards that are being daily perfected in the Medical, Surgical, Sanitary and Health departments of the Surgeon General's office and under which he lived while in the country's service. He will have witnessed, on numerous occasions, their effectiveness and will be more or less intimately familiar with the ends that they attained in preserving and safeguarding the health of the soldier. These men will not return to the foul, disease hoarding rooms of the slums, the dirty tenement, the ramble-shack home without plumbing, dark and with deficient ventilation.

The soldiers will have become accustomed to fresh air, good food, open air sleeping, frequent bathing, physical exercise and the observance of the laws of hygiene and preventive medicine. He will come to recognize their importance and value by reason of his physical improvement and will have learned that his longevity of life is dependent upon continued observance of those laws. He is going to de-

mand and secure these conditions for himself and immediate family and he is going to teach their value to his neighbors so that they too will secure the benefits thus to be obtained.

The soldiers will likewise have gained more or less knowledge, reliable knowledge, as to the cause of disease and will have learned that definite factors and conditions tend to cause pathological states and bodily infirmities. He will know considerable about preventative medicine and measures and he will practice the observance of those rules of prevention and avoid disease producing surroundings and conditions.

These thousands of soldiers will become health missionaries in the communities to which they return and their preaching the doctrine of modern laws of securing and maintaining healthful surroundings and modes of living will cause to be witness the employment of full time health officers in every community.

When sickness does visit this soldier or members of his family he is going to select his medical advisor according to the degree with which a doctor conforms to this new standard. Naturally they will ask first for his credentials. The mere fact that one has a diploma and license to practice will not be sufficient. They will demand that the physician they employ, or the surgical consultant that is called has that degree of efficiency and training as now governs the medical officers of the army. Standards of case records, physical examinations, laboratory routine, sanitary measures, therapeutics and operative measures that are precise, accurate and efficient will be the qualifications that he will exact and which the soldier will insist must be possessed by the doctor whom he employs.

This war will separate the profession from the standards and practices of the past and the traditions that have governed our relations with the public. That era is closed and a new attitude will be forced upon us. No longer will the quack practice his deceits; the "shot-gun" prescriber will find the people deserting his "hit or miss" methods; the braggard will not cause awe or reverence by his tales of wonderful cures, numerous operations, large clientele, aborted pneumonias, typhoids, etc., etc., a feel of the pulse, a look at the tongue and a prescription or box of pills and "Come and see me in three days" will no more satisfy these enlightened patients; rheumatism, gastritis, catarrh, bronchitis, bilious and similar vague indefinite as well as meaningless terms will not

cause your patient of tomorrow to maintain his confidence in you. Your people who consult you will be free from the wiles and mysticism of the past. They will demand and expect that you exercise that knowledge, that skill, care and ability which they will know is possessed by the enlightened, modern physician and surgeon.

This brings us to the point we wish to make and the warning we desire to disseminate. What are you doing, Doctor, to remain abreast with medical and surgical progress? How are you preparing yourself to meet up to those new standards and conditions that will be exacted from you if you are to maintain your practice and clientele? Are you recognizing the change that is being wrought and are you adapting yourself and your work to these new conditions? We urge that you give heed to the new order of things that will from now on be upon you. Study, read your journals—good journals, visit clinics, attend your society meetings, acquire the habit of making case records, utilize the help of laboratories, spend more time in careful physical examinations and strive to attain an analytic definiteness in your methods. By so doing you will remain abreast with the wonderful progress that is being made in medicine and surgery.

THE ANNUAL MEETING.

This issue contains the practically completed program for our Fifty-third Annual Meeting. We believe that it will be a meeting that will stand out in the history of our Society. Never will we again have such a wonderful and historic feature as the Day at Camp Custer.

The First General Session will be a most interesting, absorbing one. The addresses at that session will be of timely interest and acutely instructive.

The Section Meetings will be of unusual interest; the papers and discussions are going to be right up to the minute and no dry, uninteresting subjects will clutter their programs.

The Evening Session, Wednesday, will be of a patriotic nature. From seven to eight o'clock there will be a band concert rendered by the combined band of Camp Custer composed of 150 pieces. This will occur in the opera house. Promptly at eight o'clock the formal program will commence. Rev. Wishart has spent nine months at the front in France. He is an eloquent speaker and will give us a vivid word picture of conditions "Over There." The army

officer we are endeavoring to secure will give us another side of life in the trenches. Dr. Inches needs no introduction. His visit to French and Italian hospitals and fronts will be told of by word and pictures. His collection of lantern slides vividly convey actual conditions. We are certain that this evening session is going to be of most absorbing interest. You are going to come in contact with men who have had actual experience and they will convey vital information as to existing conditions.

The Day at Camp Custer. Never again will such opportunity be afforded you to visit this cantonment and become familiar with its operation and routine. We are indebted to the officers in command for the privilege. The demonstrations, clinics, exhibits, grand review and drills will surpass any previous demonstration conducted before our Society. We cannot commence to describe it. You can only appreciate it after you have spent the day at Camp Custer with its 30,000 soldiers.

Important: The Wednesday Evening Meeting will be open to those who hold reserved tickets. No admittance without a ticket. Ask for reservations when you register. Please don't expect to obtain tickets the last minute. First come, first served. It behooves you to be in Battle Creek Wednesday morning early.

Important: The Clinics in Surgery, Medicine, Eye, Ear, Nose and Throat and Genito-Urinary Diseases will be limited in capacity. About 125 can be accommodated in each clinic. Admission to these clinics will be by ticket only. Members must select the clinic they wish to attend and secure a ticket of admission. These tickets will be given out at the Registration Booth on Wednesday morning. We cannot increase a clinic's capacity so must ask you to make your application early if you do not want to be disappointed.

Caution: This is a military camp conducted by officers on duty during war. A concession has been granted our organization and we are privileged to admittance to certain portions of the camp—in the vicinity of the Base Hospital. The entire camp will be policed by guards as it is every day. These guards are instructed. Please do not wander promiscuously and inquisitively about. We trust that no one will violate the privileges extended to them or seek to stray into forbidden quarters.

This is sure going to be some meeting and if you are not on hand Tuesday evening or early Wednesday morning you are going to miss op-

portunities that will never be again offered to you.

The Registration Booth will be located in the Masonic Temple and will open at 2 P. M. Tuesday and 8:00 A. M. Wednesday.

PAYMENT OF DUES.

The failure to have paid your annual dues to your county society on or before April First compels us to place you on the suspended list. The only way that you can secure reinstatement is to pay them now and to have your local secretary's remittance reach the State Secretary by April 15th.

During your suspension you lose the protection of the defense league for suit brought at any time for services rendered during the period of your suspension: the *Journal* will be discontinued; your name will be removed from the membership roll of the A. M. A.

This is your last notice. We urge that action be prompt on your part.

HOTELS.

No one need be without accommodations at Battle Creek providing they make early requests for reservation. Write now for your room. If you wait until the last minute you will be disappointed.

REGISTRATION.

The Registration Booth will be located in the Masonic Temple and will be open from Two until Eight P. M. on Tuesday, May 7th. No tickets to the opera house or Camp Custer clinics will be given out *until Wednesday Morning*. The Booth will be open Wednesday from Eight A. M. to Seven P. M.

Be sure and request your reservation on Wednesday only. No tickets will be given to those who have not registered and do not have an official badge and guests credentials. You must secure a guest credential when you register.

These requirements are made necessary by the conditions placed upon your State Secretary by the Commanding Officer of Camp Custer.

AUTOMOBILES.

There will be ample room in Battle Creek garages for storing your car. You cannot drive your car to Camp Custer for there is no space

in the Camp for parking. You are on a United States Government road that is patrolled and will not be permitted to park on the roadside. The Base Hospital is three and one-half miles distant from the Camp entrance and you cannot walk that distance. Take the licensed automobile that is permitted to enter the Camp. Take no chance and have your car impounded.

Editorial Comments

One wonders how a doctor can continue his practice, maintain the confidence of people, and pursue an even tenor of way with peace of mind when his carelessness or lack of knowledge reveals the following repeated errors: Biliousness the diagnosis—with acute appendicitis as the true condition; appendicitis the diagnosis, pills the treatment and promise of cure assured when seven months pregnancy exists and the absence of menstruation explained as being caused by the chronic appendicitis, with no physical examination having been made. "Change of Life" the diagnosis, viburnum the medicine, no special examination, the condition being excessive "flooding" caused by well advanced uterine carcinoma with characteristic "frozen pelvic" organs. Rheumatism the diagnosis, medicine of various kinds, the treatment for pain in the knee with tubercular involvement of the hip the true condition. We might continue and mention the bronchitis for tuberculosis, vulvo-vaginitis with diabetes, asthma for decompensated hearts, catarrh or gastritis for the gastric or duodenal ulcer or cholecystitis, etc., etc.

Can we blame anyone but ourselves for losing public confidence or for the whole profession being deprecated by reason of the carelessness of a few? The sooner we awaken from our lethargy, the more careful and painstaking we become, when we exhaust all modern methods, then and not till then will it be human for us to err. May we all strive to become more proficient in the practice of our profession and cut out the "bunk."

It has taken many years and much insistence to make the profession appreciate that a choked disc is a mechanical process due to tension which can be surgically relieved even though a localizing diagnosis cannot be made. It will doubtless take many more years to make them feel that it is somewhat disgraceful under these circumstances to permit a patient to become blind or even to allow the process to advance to such a stage that vision becomes impaired.

We have commented upon this fact frequently but

reoccurring instances of far advanced cases keep presenting themselves.

Dean Victor C. Vaughan, of the Medical School, lieutenant-colonel of the National army, addressed a combined assembly of the entire Medical School of the University of Michigan this past month on various topics of the war of particular interest to medical men.

"Every medical man belongs in the service," said Dr. Vaughan. "To keep a doctor out of service would be to handicap him in the future. He would have to explain constantly under the most embarrassing circumstances, why he had not served. We are in the war," he said later, "to fight unto death. President Wilson's statement that we are fighting to make the world safe for democracy is too academic and fine-grained for me. We are fighting the Hun with the cries of innocent women and children of the Lusitania and Belgium ringing in our ears."

Shiawassee county doctors sometimes send their remittances for dues set to poetry, as instance the following by Dr. L. D. Hixson of Durand:

Dear Doctor Ward:

Enclosed you'll find a yellow check
To square my '18 dues, by heck!
I hear it takes \$4.50 to play
And every poor cuss that sum must pay!

No doubt but that you'll grimly smile
When you are raking in the pile.
But after all why should we weep
And all our shekels try to keep?

For when we leave this earthly shore,
Those greenbacks we can use no more.
But while on earth we yet can stay
Our duty 'tis our debts to pay.

When *some* of our poor little flock
Go way up yonder and shall knock,
St. Peter then will open his book
And give them just one hell-of-a-look!

A wireless quick to Doc he'll send,
Their ways they'll wish that they could mend!
Their outlawed dues they'd gladly pay—
But Doc wires back "No, no, nay, nay."

"The time is past, they can't repent,
Their check they should long since have sent.
To pay their dues it's now too late—
Poor sinners! They must meet their fate!"

Don't fail to write for Hotel reservation

Secure your special admittance tickets to the evening meeting and Camp Custer Clinics on Wednesday morning. No admission to these clinics or meetings without a special ticket.

Ladies will be privileged to witness the Camp Review and demonstration at Camp Custer in the afternoon. No provision can be made for their entertainment at the Camp in the morning or at the Noon Mess.

This General Review of every officer and man on duty at Camp Custer will be a wonderful spectacle. It will require two hours and 30,000 odd men will participate.

Ample arrangements at the hotels and sanitarium will insure your comfort providing reservation is made. Do it now.

You cannot hope to secure special tickets if you arrive in Battle Creek late, Wednesday evening or Thursday morning.

Our invited speakers will convey to you vividly existing conditions "Over Seas."

Do not fail to pay your annual dues for 1918 before April 15th. That is your last day of grace.

Delegates are urged to be on hand promptly at the two sessions of the House of Delegates. By promptness the work of the House of Delegates may be dispatched without tiresome delay.

The next annual session of the American Medical Association will be held in Chicago in June.

We again urgently request that members receiving interesting correspondence from members on duty "Over Seas" share these letters with the men at home. The *Journal* welcomes all such communications for publication.

No, please don't overlook our advertisers. They make your *Journal* possible. At least write them and tell them you have seen and read their advertisements. We need your support.

We have several dead or nearly dead county societies. We feel certain that if some of them will attend our annual meeting that they will be inspired and returning home will become active in arousing their fellows from their lethargy.

The traitor, the alien enemy railing against this

government or any of our allies merits no toleration whatever. We are eager to see every one of them dealt with as custom decrees for spics. Interment is too humane; a brick wall and a firing squad should be the effective method of dealing with them. Let every member become a special operative to detect and report these contemptible curs and so cause them to receive the punishment these enemies deserve.

We are certain that it will no longer be William II. Future events will cause it to be written—William "The Last."

Sometime ago we commented upon the imposition of insurance companies, especially of the indemnity type, in requiring certificates of physical condition of injured or sick policy holders before the payment of benefits are made. No provision is made for the payment of the doctor who is expected to protect the company's interests and forestall fraud. It is a sheer imposition and holdup and doctors are easy marks who dispense such gratuitous service. We note that the subject is now being agitated in the *Wisconsin State Journal*.

Correspondence

Chicago, February 23, 1918.

Dr. F. C. Warnshuis, Editor,
Grand Rapids, Mich.

Dear Doctor:

We congratulate you on your excellent work, culminating with the February issue, as Editor for five years of the *Journal of the Michigan State Medical Society*.

In many respects your *Journal* is one of the leaders among medical publications. Especially is it noticeable for the excellent quality of paper and its typography, as well as the variety of the reading matter. The "first impression" which advertisers and the general public receive of a *Journal* is a very important consideration. If that impression is favorable, they will quite naturally select it to read, or to place their business in, and often to the exclusion of larger journals, which do not give that favorable "first impression."

May the *Journal* continue to improve and prosper under your editorial management.

Very truly yours,

COOPERATIVE MEDICAL ADVERTISING BUREAU,
E. W. MATTSON, Manager.

(We are much indebted to Dr. W. P. Manton for the privilege of publishing the two following interesting letters.)

Headquarters, Base Hospital 36,
A. E. F., France,
January 30, 1918.

My dear Doctor:

Your welcome letter was received yesterday and I was indeed glad to hear the news from home.

This Unit arrived here, as you know, on the 18th of November, and we were lucky enough to draw a location in the foot hills of the mountains up near the frontier in a beautiful little watering place. We immediately went to work organizing and equipping the five enormous hotels assigned to us and we now have in place 1,788 beds. We opened up with 300 patients on December 8th and more than 1600 have now passed through our hands. We have done a great deal of surgical work, and have in our hospital the first American wounded soldier in France.

We are all very busy at present as our Commanding Officer is away at the British front and the details of the executive work have fallen to me.

Major Barrett opened his hospital of 450 beds in the Palace with a vaginal hysterectomy on a civilian patient who made a very brilliant recovery and established a wonderful reputation among the civilian population for this Unit as the French doctors had pronounced her case incurable.

I have the head hospital with a capacity of 700 beds and have done a number of mastoid operations, and the usual operative routine of our special work.

Frank Walker successfully operated a fracture of the skull some days ago caused by the explosion of a one pounder gun, relieving an adhesion and depressed fracture that had been missed by the Johns Hopkins Unit, sixteen miles away.

Every Monday night we have a Medical Society Meeting of our staff personnel on interesting and difficult cases for diagnosis and observation. Last night Joe Sill and Clift gave a laboratory evening with lantern slide exhibition from the cases now under our own observation.

We have five X-ray plants, one in each hospital. The equipment which Detroit so magnificently provided for us is a wonderful advantage because it is almost impossible to obtain supplies in this place. The transportation is something terrible in this country.

Frank Walker performed a gastro-enterostomy on one of the nurses this morning who has had a gastric ulcer developing aboard ship. One of the nurses is seriously ill with pneumonia, otherwise the health of this command has been most excellent. McGraw has gained fifteen pounds and Sill fourteen in three months from home.

We expect to open up the golf links of nine holes

and eight tennis courts as soon as the weather permits, to get a little necessary exercise in the long hours of the evening. We are so far north that in the summer time it is daylight at nine and ten o'clock. At present we have had no time for anything but work and organization and the development of this hospital plant. My own frivolity was a two weeks' tour of France in a Paige machine visiting these hospitals. This tour was very valuable in getting ideas. I feel certain that our location is the best in France, and our opportunities, only forty miles from the firing line, are unexcelled to accomplish the object of our mission. I visited the Harper Unit a few days ago which is eighty-five miles from us. They are still in great confusion making over a very old and very dirty building formerly used as a Jesuit school for boys. We are endeavoring to adapt ourselves to circumstances and have had very little in the way of modern improvements.

The officers are delightfully quartered in four French villas where the heating problem is provided for in a way with diabolical French stoves. We have 700 of them in various parts of these enormous hotels, although the heating plant is provided in three of them. Two of our hotels have been cleared for French wounded which we expect to take in a few days. Nine hundred beds will be devoted to their care.

I am glad to know that Walter has such a good position and shall call upon him if I ever get to the great city.

We have a wonderful laundry here which I have visited today, about two miles away. It is fitted up with the most modern machinery and is wonderfully arranged to care for hospital units. It was the laundry for the summer hotels, but has been remodeled by a laundry expert of the Quartermaster Department.

I have just taken over a wonderful refrigerating plant which I have rented for 1,800 francs a year. It makes ice in long tin pans by means of a brine and rapid evaporation process. It will be fine for the sick in the summer time. We did not bring a laundry machine with us nor a refrigerator apparatus, and therefore we were worried about obtaining ice. The problem is now solved.

There are three other units in the immediate vicinity from cities near Detroit. These have arrived recently and will have a bed capacity of at least 1,500 each which will, therefore, take care of from six to ten thousand patients in this center. Wish you could drop in and see us, and we would give you a bottle of mineral water with a big cake of ice in it. If anything else went in it would be necessary for you to bring it as the Y. M. C. A.,

the Red Cross, the Y. W. C. A., the Chaplain and the secret service are all watching us. If it were not for the mineral water we would be as dry as a diabetic not to mention a mummy, and I presume on our return May 1st, or thereafter, the dry law will not affect us in the east. This applies to whiskey only. We can obtain a little wine now and again for the stomach's sake, but our officers are certainly making a record, including Lieutenant Van Rhee, who after recovering from the mumps two weeks ago, I have just sent to his room with a good blooming, flourishing case of measles. This is the way a children's specialist thrives in France. We have nothing to complain about, and much to be thankful for. I am glad you are holding down the Shurly building in good shape, and I hope they will be able to rent any spare space to the Home Guard whom we all wish to join in the near future.

With kindest regards to all, and thanking you for your thoughtful letter, I am,

Very sincerely yours,

BURT R. SHURLY,

Maj. M. R. C.

(For the following letter we are indebted to the courtesy of Dr. L. W. Hull):

Dear B.:

Since you mentioned Xmas, I'll say I never saw one so thoroughly enjoyed as was this last one here by patients, nurses and men. These one-storied frame hut wards were decorated from one end to the other with fir trees, holly and mistletoe, and the patients made yards of colored paper chains and lanterns. Along after tea time when the lights were going they looked great. The Tommies and our own wounded ate until they couldn't take any more. It was strange to hear a lot of them beg to stay over here for that day, rather than be sent home to England.

New Year's day saw E—— of Cleveland and I on our leave to England. We had sixteen days of it and believe me it was a wonderful time. Two more of our unit joined us in London a few days later, so we had a good crowd. We saw a lot of good shows, did a lot of necessary shopping and hunted out most of the good restaurants while there. Had a fine afternoon looking through the Royal College of Surgeons and seeing the splendid exhibit of this present war. Various protective measures, both German and British were there. Also all varieties of wounds of bones, internal organs and the like. An immense amount of time must have been taken to prepare any one of these. Many of the Home Hospitals had individual exhibits of their own including special treatments, casts made before and after treatment and pictures and cuts of various kinds. All in all it was most interesting

especially as our government is starting a similar exhibit which I believe is in the hands of the American College of Surgeons.

Also had several visits with Kidner. He has the best post in the war that I have seen or know about. Has two services at the Military Orthopedic Hospital at Shepherd's Bush and also St. Katherine's Lodge, Officers' Hospital. Many things that one sees rarely at home he is seeing nearly every day and the English seem to well appreciate his ability—makes one want to be an orthopedic to see what he is getting. He lives at the latter place, which is the finest looking small hospital we have seen. It is in Regent Park and was especially fitted up for wounded American officers, but at the present time is used for officers of other countries as well.

Visited other London hospitals especially those receiving patients just arriving from over here whose problems are much like our own.

Had time to get to Edinburgh, which as you know, is an interesting city. Saw the Royal College of Surgeons, the College Hospital and visited Stiles at the Edinburgh War Hospital at Bangour. Saw him do several interesting nerve sutures and the like. The trip was worth it even if we rode both ways at night sitting up.

Also went to Dublin for a few days and visited my cousin. The country about that city was the most beautiful and orderly that I have ever seen. Saw the Irish R. C. of Surgeons here where the two or three Colles held forth. Dublin Castle is now a military hospital.

Have been in charge of the surgical side here and in the parlance of British hospitals am the S. S. or surgical specialist.

Things have been fairly quiet here of late, but of course no one knows when the curtain will go up again. * * * *

I am sorry that I can't go into details over that leave trip but space forbids. Anyway you can see how we all enjoyed every minute of it as it was our first real rest in nearly eight months.

As to our future, no one can tell a thing. We may remain with the British or go with the American forces. For the present we are well satisfied because we have enough interesting work to do and are well taken care of.

* * * *

LT. H. K. SHAWAN, M. R. C.

February 4, 1918.

"Well, here I am out in the woods. I chose this direction because it brings me in touch with our own men, and the rough life, I hope will harden me up a bit. Leaving the city (Paris), was just like leaving home. I was there three months and was very

comfortable, except for lack of sleep and for the responsibility of doing so many things without adequate help to assist in doing them. The city was not war and I was glad, on the whole, to leave. Mrs. Shields, the Whitlaw Reid representative, was very sorry to see me go, and as she expressed it to the General, "it was mean of them to take me away." So you see everything was amicable in that direction. Among the men I met before leaving the city were Goldthwait, the orthoped., and Keys, the G. U. man. The latter I liked very much; he is a splendid specimen. Now I am getting eight or nine hours sleep every night, except when I wake up from the cold. And it is cold here out in these wooden shacks in the country. This I hope is not my permanent place, or rather my near-permanent place, (nothing is permanent in this enterprise). I am awaiting orders to move further forward. I prefer the type of surgery which is performed immediately after injury and am working to get a position where I can do this kind of work. Here as chief surgeon, (temporarily), of a field hospital, my responsibilities are confined to the operating room and to the patients in the surgical ward. We eat straight American food, which is meat and potatoes, bread and butter, with an occasional spatter of jam or canned pineapple. Just now I am more or less in the same district that I was when with Major Finney. In fact, I took an ambulance ride to-day to within five miles of that place."

W. W. MANTON,
Captain, M. R. C.

France, January 5, 1918.

* * * * We have just returned from what is considered the hottest part of the line, on the western front. There are no trenches there. The men of both sides are posted in shell holes, and it is sometimes hard to tell where the German line is, and where the British is.

My R. A. P., (Regimental Aid Post), was in a "pill box," built and formerly occupied by the Hun. You can see by this that the only opening in it would be toward his line. These "pill boxes" are built of cement, and lined with corrugated iron, and are practically shell proof, the only danger being in entering or leaving, when you are exposed to the view of his machine gunners, and his snipers. This is overcome by moving about only by night as far as possible, thus, if a man is wounded during the day, he lies in a shell hole until dusk, and is then brought in. Of course, a real serious injury requires immediate removal, and then the stretcher bearers take a chance. The "pill box" entrance is not large enough to admit stretchers, and these cases are dressed outside and then taken immediately back

to the field ambulance. Walking cases are brought inside to be dressed, and walk back to the F. A. at convenient times.

I don't think I shall soon forget Christmas, 1917. For over a week I did not have any clothes off, or a chance to wash. The first night out of the line I was so sleepy that the rats, squeaking and running about the dug-out in which I slept, did not bother me in the least. Under normal conditions I prefer almost anything to rats.

At the present time, we are in a French town, which has been evacuated by the civilians. I have a room to myself in the most palatial former residence of a brewer. * * * *

Yours,

TOM MARSDEN,
Lt. M. R. C.

Deaths

Dr. I. W. Norris died suddenly at the Soo on Feb. 26th. He had practiced medicine in Corunna for several years, but moved to the Soo a year ago hoping that the change would benefit his failing health.

Dr. Raymond A. Clifford of Ypsilanti died of acute heart trouble at the sanitarium at Clifton Springs, New York. Last August he underwent a very serious operation from which he apparently recovered, but during the winter his work was so taxing that in February he went to the sanitarium where he died on March 2nd. His death is keenly felt by the many friends he had made during the 18 years he practiced at Ypsilanti.

State News Notes

Dinner to Medical Officers of French Military Hospitals of Dijon given by Medical Officers of Base Hospital No. 17, U. S. Army, Friday evening, February 8, 1918:

Those present were as follows:

General Duplessis.
Docteur Hugard, Medecin-Chef de la Place, Hopital General.
Docteur Leveque, Hopital General.
Docteur Lucien, Hopital General.
Docteur Guibe, Hopital 71.
Docteur Sourdel, Hopital 71.
Docteur Genevoix, Hopital 71.
Docteur Lagarenne, Hopital 71.
Docteur Thevenard, Hopital 71.
Docteur Cistrier, Hopital 71.
Docteur Corneloup, Hopital 71.
Docteur Faguet, Hopital 71.
Docteur Hugonnard, Laboratoire de Bacteriologie, Faculte des Sciences.
Docteur Cousteau, Medecin-Chef Hopital 99, Centre O. R. L.
Docteur Menier, Hopital 99, Centre O. R. L.

Docteur Lacau, Hopital 99, Centre O. R. L.
Docteur Cantonnet, Hopital 76 (Chef du Centre
Ophthalmologique).

Docteur Rasse, Hopital 76.
Docteur Berard, Hopital 76.
Docteur Hubert, Hopital 76.
Docteur Bottemer, Hopital 76.
Docteur Gauthier, Medecin-Chef Hopital 76.
Docteur Teinturier, Hopital 74.
Docteur Charmont, Hopital 92.
Dr. Gremot, Medecin-Chef Hopital 81.
Docteur Daubret, Hopital 81.
Docteur Schnaebele, Medecin-Chef Centre de Re-
forme, Hopital 81.
Docteur Vallee, Hopital 81.
Docteur Longin, Hopital 81.
Docteur Roy, Hopital 81.
Docteur Gallois, Hopital 73.
Docteur Nicot, Hopital 73 (Talent).
Docteur Testevuide, Hopital 71.
Docteur Charpentier, Chef du Laboratoire Militaire
de la 8 Region, Universite de Dijon.

Central Laboratory.
Doctor Seiler.
Doctor Foster.

Base Hospital No. 17.

Doctor Henry C. Coburn, Jr., Med. Dept. U. S. Army.
Doctor Angus McLean, M. R. C.
Doctor Harry N. Torrey, M. R. C.
Doctor George E. McKean, M. R. C.
Chaplain M. H. Wallace, M. R. C.
Doctor Louis J. Hirschman, M. R. C.
Doctor Ernest K. Cullen, M. R. C.
Doctor Rolland Parmeter, M. R. C.
Doctor Walter D. Ford, M. R. C.
Doctor Robert Owen, M. R. C.
Doctor William A. Spitzley, M. R. C.
Doctor John C. Dodds, M. R. C.
Doctor James F. Breakey, M. R. C.
Doctor Thomas K. Gruber, M. R. C.
Doctor Alexander M. Stirling, M. R. C.
Doctor Alfred D. La Ferte, M. R. C.
Captain Henry E. Williams, Q. M. U. S. R.
Doctor W. H. Honor, M. R. C.
Doctor Duncan A. Campbell, M. R. C.
Doctor Cyrenius B. Lockwood, M. R. C.
Doctor Eror H. Larsson, M. R. C.
Doctor Leroy H. Belt, M. R. C.
Doctor Hampton P. Cushman, M. R. C.
Doctor Frederick G. Buesser, M. R. C.
Doctor Hunter L. Gregory, M. R. C.
Doctor Stillman G. Davis, M. R. C.
Doctor George B. Seeley, M. R. C.
Doctor Hugh A. Sullivan, M. R. C.
Doctor William T. Shannon, D. R. C.
Doctor Earl C. Barkley, D. R. C.
Doctor Francis C. Bartleman, D. R. C.

Menu.

Potage Fulienne, Poularde en cocotte, Garniture
légumes, Rosbif rôti Salade, Glace Parfait, Fromage
Fruits.

Introductory remarks to Allied soldiers at Palais
Darcy:

This is an unusual opportunity to have a friendly
union between the soldiers of Italy, France and
America. The soldiers of these three great nations
are fighting for humanity the noblest aim of warfare.

We greatly appreciate Italy's alliance in this war,
especially so after Russia's uncertain state of arms.
This great country of France with her noble sol-
diers will be our home from now until the day of
victory. We welcome our Italian comrades to the
continental land of safety, made so by the French
Artillery, and their brave poilus. The French Min-
ister of war has suggested that friendly relations

be established among the allied soldiers in France.

We are glad to have an opportunity like this to
invite portions of the armies of three great nations
of the world to meet as one, and where the three
greatest national Hymns of the world will be sung,
namely March Royal, the Marseillaise, and the Star
Spangled Banner.

We trust that the great Republic of France will
not wait long before a deserving victory will be
brought to her and all allied lands of Justice and
Freedom.

Detroit Commandery No. 1.

ANGUS MACLEAN.

Address of Colonel Hugard Medecine Chef de la
Place, Hopital General, at Banquet Given
the Military French Surgeons, by Medical
Officers of Base Hospital 17.

In the name of the French Military, medical corps
of the Place de Dijon, and in my own name, I am
glad to express our hearty thanks to Major Angus
McLean for his kind toast, and to tell all American
doctors how greatly we appreciate this manifestation
of sympathy which has brought us this intimate and
courtous reception.

I applaud with all my heart at this meeting of
doctors, of the American and French Medical ser-
vices, for it will make stronger the confraternity
and strengthen the cordial bonds which will be tight-
ened more and more by a mutual frequentation.
These bonds exist now for ever between men who
esteem mutually, who have the same aspirations, the
same ideal, who pursue the same scope. We shall
gladly see frequent meetings between doctors who
may instruct themselves mutually in the same thera-
peutic methods, and improve the operating proced-
ures in both countries.

It is for me a very agreeable task to recall to
your mind how perfect was the harmony between us
since our first interview, just at the moment when
took place the arrival of your Unit, which came as
a van-guard of the great American army. You have
brought us the benefit of your great liberalities, you
made easier the collaboration of the departments,
and recently, when I came to you to speak about
the eventuality of invoking your assistance in case
of need, you quickly agreed to put at our disposal
500 beds for wounded soldiers, if it should become
necessary.

Allow me to tell you our gratefulness for the past
and for the future. It may be possible that the
events of war require your services very soon, for
a large number of wounded who will require all
your resources, and all our exertions, and we are
happy to see that your precious help will not fail us.

The enemy has concentrated his forces on our
front where American troops are already in the

trenches. He has just renewed as usual, his outrages which have shocked all civilized nations, and have lead you to come and place yourselves by our sides.

Without any discernment and uprightness, he realizes those outrages, sometimes he sinks a ship containing some inoffensive passengers, sometimes he drops bombs on a defenceless town, and unfortunately, sometimes too on our medical formations, which are no more spared than our wounded.

Thus he has no respect for anything, not even for this admirable convention of Geneva, at the end of which he put his signature.

This contempt of any right, of any engagement, for every convention, shows what is Germans blood, and it has not begun with the present war, but it has made of it a common practice in every time.

I recently told an incident of the war of 1870 to the General Duplessis who exalts our meeting by his presence. It is with his agreement that I make a claim on your kind attention only for a moment, in order to narrate a suggestive account of this incident.

Forty-seven years ago, on January 21, 1871, a German Force, Commanded by General Keller, attacked Dijon, which was defended by Garibaldi's army. Driven back, the German army that evening took a position near the little village of Hauteville, about four miles from Dijon. The 61st Pomeranian regiment, being fired at from this Hamlet, attacked it at once. The little town, not being occupied by many troops, was evacuated by ours. The enemy came into the place which was in complete darkness excepting one house, which had on its front door, the Red Cross flag. It was a first aid station, where there were three Surgeons, and a few French wounded. A discharge of musketry riddled the house, especially the windows and doors, and severely injured a girl of sixteen. The Chief Surgeon Morin, who spoke German, came to the door and shouted out that the house was a shelter for a field-lazaret, showed them the Red Cross flag, and his brassard. He was immediately brought down by a rifle bullet, and dispatched on the spot. A second surgeon, who showed his brassard too, was massacred under the table, where he sought shelter. The third succeeded in escaping by the back door, after he was wounded by a shot.

At this time arrived a Prussian Officer who approved the murder.

The following day on the 22nd, the attack on Dijon was renewed.

The Germans were defeated, their advance was checked, they were driven back more and more, and at a few hundred yards from Hauteville, at the farm of Chargey, a German Ambulance was taken, and fell into our hands.

The moment had arrived to revenge the slaughtering of our doctors on the previous evening.

The revenge took place, but in our way, the German wounded were collected, dressed, comforted, and we took care of the Medical Personnel.

You will judge for yourselves, how different is the mentality of the two nations, this one of our enemy, and ours, during these tragic circumstances.

Now my dear comrades, with all my heart, I drink a toast first of all to President Wilson, this great Chief of State, this noble minded man, this representative of Democracy and of justice, then to the American doctors of the Place de Dijon, to the whole American Medical service, and to the army of the noble American Republic, whose future exploits on our side, we salute until we have the final victory.

(Translated by M. le Docteur Menier-Hopital 99, Dijon, for Dr. Angus McLean, Base Hospital 17.)

Flint's campaign for the cleaning up of diseases due to the social evil is accomplishing a great deal of good. Thirty-five persons affected with venereal diseases have been sent from Flint to hospitals in Detroit, Battle Creek and Jackson for treatment since the campaign begun. The largest percentage of these are women who have been running the streets, a menace to public health, although there have been a number of men sent away also. About 50 per cent. of suspected cases have proven on examination to be suffering from syphilis or other venereal diseases, according to tests made by the city bacteriologist employed by the Board of Health. Though the campaign for examination of persons employed in handling food and dishes in eating houses recently begun by Dairy and Food Inspector Edward J. Friar at the suggestion of the state food commission, results are showing that it has been a good move for the protection of public health. A number of persons afflicted with communicable diseases have been barred from further employment in restaurants because of being afflicted.

A proposal from the Detroit College of Medicine that its institution be taken over and managed by the local board of education was accepted by the board at its weekly meeting. The board voted to include in its supplemental estimates for the coming year the sum of \$30,000 for the college. By the action of the board of education the Medical college would become a municipal institution.

If your dues are unpaid when you receive this *Journal* you are now in suspension. Only prompt payment within the next ten days to your County Secretary can accomplish your re-instatement.

Please write for your Battle Creek hotel reservations early.

We hope to publish a complete list of our members in active service in our May issue.

It is reported that Dr. H. E. Randall of Flint, now Overseas with Unit 36 was privileged to operate upon the first wounded in action soldier of the American Expeditionary Force.

Dr. Alfred LaBine of Calumet has recovered from his recent operation for appendicitis.

May we have your personal contributions to this News Column?

The city of Grand Rapids has authorized the employment of a full time Director of Tuberculosis.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

INGHAM COUNTY.

A regular meeting of the Ingham County Medical Society was held in the Chamber of Commerce, Lansing, February 26th, 1918.

A special committee for an investigation of medical protective insurance and analysis of policies of the Fort Wayne Company and the Aetna Company under its group plan made its report that in their opinion, as advised by their attorneys, the Fort Wayne policy is the preferable.

Following is the program:
"Hernia in Early Life"

William D. Lyon, Jackson.

Discussants—O. H. Bruegel and G. F. Bauch.
Case Report, "An Interesting Eye Condition."

A. E. Owen, Lansing.

Case Report, "Syphilis Observed for Four Years."

F. J. Drolett, Lansing.

Doctor Lyon's instructive discourse on hernia in infants included all types and appealed to the interest of surgeon and physician. He takes the belief that all hernias are potentially congenital, that is, no hernia can occur without a congenital defect. Treatment consists of: 1. Palliative, with apparatus; 2. Curative or radical, i. e., surgical. He urges radical treatment for all hernias after the second year and probably after the first. The hernia of the first year may be cured by keeping the sac empty with the hope of its occluding. He makes a forceful plea that all hernias should be operated before the child enters school for at no period is there time so valueless. For palliative treatment he uses a pad of cotton so covered with adhesive that it is water proof and he holds it in place with adhesive strips which meet in the back so that the tug comes on the adhesive and not the skin.

Doctor Owen reported an interesting extra

ocular paralysis with gradual onset and doubtful etiology.

Doctor Drolett reported a family in which there were two sudden deaths of children and syphilis was proven in the mother during her third pregnancy. Under rigid treatment, her third child was born at full term and is apparently healthy on a goat's milk diet. Recent Wassermanns on mother and child were negative.

There were two patients for demonstration by Doctor Lyon and twenty-two were in attendance.

EARL I. CARR, Secretary.

JACKSON COUNTY.

Following is the list of officers, as elected by the Jackson County Medical Society, for 1918:

President—Dr. F. L. Rose.

Vice-President—Dr. G. R. Pray.

Secretary—Dr. C. S. Clarke.

Treasurer—Dr. John Smith.

CORWIN S. CLARKE, Secretary.

KENT COUNTY

Annual meeting of the Kent County Medical Society was called to order by President F. J. Lee, January 9, 1918.

1. Report of the Secretary-Treasurer.

2. Report of all Committees.

Board of Directors report submitted by Dr. F. C. Warnshuis:

(a) Recommendation of remittance of \$1.50 to the State Society for each of the members in the Service.

(b) Recommendation that a fitting tribute be paid to the oldest member of the Society, in point of service. The member referred to being Dr. Rutherford, the mode of tribute being a dinner or banquet, this to be given within a month's time.

Report accepted and favorably recommended by those present.

Delegates to the State Society, report submitted by Dr. Brook: Dr. Brook stated that owing to the fact that there had been no meeting held in 1917, he had no report to make.

Public Health and Legislation Committee: No report.

Library Committee: No report.

Entertainment Committee: No report.

Visiting Sick Committee: Dr. Wenger stated that several visits had been made. He also reported the death of one member, Dr. J. A. McPherson.

Press Censorship Committee: Dr. F. N. Smith reported interviews with the editors of the several newspapers in the city and that there had been a noticeable reduction in the number of members names appearing in said papers.

Dr. Wm. DuBoise was recommended for the State Councilor for the local society.

Dr. G. L. McBride was retained as Defense League representative.

Dr. DuBoise opened discussion of the State Patriotic Fund. After some discussion, Dr. Louis Chamberlain moved that the collection of money to the Fund be discontinued and that a return of the money from the State Society be made to the Local Society. Carried.

Dr. Collins Johnston moved that a letter of remembrance be sent to the members in the Service. Dr. DuBoise moved that the Entertainment Committee arrange for a dinner to Dr. Rutherford.

Dr. Lee appointed Dr. Rozema to the Chair, then delivered his farewell address, "A Resume of the past year and advice for the future."

Election of officers for 1918:

President—R. H. Spencer.

Vice-President—John Kermer.

Secretary-Treasurer—J. S. Brotherhood.

Delegates to State Society—Old delegates retained with the selection of Dr. Slemons to replace Dr. F. C. Kinsey.

Alternate—Dr. Brayman selected to replace Dr. Shanks.

New President conducted to the Chair by Drs. Hulst and Corbus.

WASHTENAW COUNTY.

The Washtenaw County Medical Society, at its annual meeting in December, elected the following as its officers for 1918:

President—Dr. Mark Marshall, Ann Arbor.

Vice-President—Dr. Max Peet, Ann Arbor.

Secretary-Treasurer—John A. Wessinger, Ann Arbor.

JOHN A. WESSINGER, Secretary.

MANISTEE COUNTY

At a special meeting of the Manistee County Medical Society held February 18th, the following officers were elected for the ensuing year.

President—Dr. E. S. Ellis, Manistee.

Vice-President—Dr. Lee Lewis, Manistee.

Secretary—Dr. H. A. Ramsdell, Manistee.

Treasurer—Dr. H. D. Robinson, Manistee.

Delegate—Dr. James King, Manistee.

Alternate—Dr. L. S. Ramsdell, Manistee.

HOMER A. RAMSDELL, Secretary.

Book Reviews

MILITARY ORTHOPEDIC SURGERY—Medical War Manual. Prepared by the Orthopedic Council of the Surgeon General's Office. 12mo, waterproof, 272 pp. Price \$1.50. Lea & Febiger, Philadelphia.

The experiences of orthopedic surgeons in the Allied Armies are the basis of this manual. It has been made thoroughly practical and concise in form. The excellent illustrations enhance its value. It is an excellent guide for all practitioners.

TEXT-BOOK OF OPHTHALMOLOGY. By Hofrat Ernst Fuchs, Professor of Ophthalmology in the University of Vienna. Translated by Alexander Duane. Published by J. B. Lippincott & Co.

To fully appreciate this book, one must be an eye specialist. A work like this is accomplished only by a life time of close application and high specialization. The opportunity to observe the great wealth of clinical material such as is available at the Vienna institutions makes the descriptive matter of the book particularly valuable. This is the fourth edition translated from the twelfth German edition. The price of the book is \$7.00.

A POCKET FORMULARY. By Edwin Thornton, M.D., Assistant Professor Materia Medica, Jefferson Medical College. 11th Edition. Lea & Febiger, Philadelphia.

It is somewhat hard to comprehend the need of such a formulary in this day of positive therapeutics and direct medication. One is inclined to resent stock prescriptions and stock formulary combinations. Again if one is a true student and practitioner his pockets are loaded with other requisites with but little room for this volume.

Still its survival through eleven editions is evidence that it fills a need and has a use. To him who must be armed with such a vade mecum this work contains all that he will want and supply therapeutic information that is useful.

POST GRADUATE MEDICINE: Prevention and Treatment of Disease. August Caille, M.D. D. Appleton & Co.

The presentation here offered to practitioner and student is based on an experience of forty years in public and private practice and thirty years of post

graduate teaching and embraces all modern methods of disease management of proven therapeutic value.

It is a splendid work imparting just the information one desires and which will be found to be most helpful.

This volume will be welcomed by the man in the harness as it will serve him to solve many of the hard problems confronting and place him on the right course of modern treatment.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of Medicine and Clinical Medicine, Medico-Chirurgical College Graduate School, University of Pennsylvania, Thirteenth Edition Thoroughly Revised with the Assistance of John H. Musser, Jr., M.D., Associate in Medicine, University of Pennsylvania. Octavo of 1259 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

A text, such as this, that has been a standard work for twenty years, and with thirteen editions to its credit requires no minute review.

It is more valuable than ever and includes additions such as are necessary to bring it abreast with modern progress and teaching. It is in every sense a modern work, complete in detail, and completely covering the field.

It will be accorded a most cordial reception for it is a most valuable text.

CLINICAL LECTURES ON INFANT FEEDING. By Lewis W. Hill, M.D., Children's Hospital, Boston, and Jesse R. Gerstley, M.D., Michael Reese Hospital, Chicago. 12mo of 377 pages illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$2.75 net.

A desirable feature of this book is the introduction of case records to illustrate the principles and difficulties in infant feeding. There seems to be a more and more wide spread tendency to adopt this extremely practical method of instruction in medical text-books. Although the study and examination of various types of stools is described in a meticulous manner, the author, nevertheless, is very emphatic in advising against meddling with the diet of a thriving child merely because the stool is slightly different from the usual healthy type.

A PRACTICAL TEXT-BOOK OF INFECTION, IMMUNITY AND SPECIFIC THERAPY with special reference to immunologic technic. By John A. Kolmer, M.D., Dr. P.H., M.Sc., Assistant Professor of Experimental Pathology, University of Pennsylvania, with an introduction by Allen J. Smith, M.D., Professor of Pathology, University of Pennsylvania. Second Edition Thoroughly Revised. Octavo of 978 pages with 147 original illustrations, 46 in colors. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$7.00 net, Half Morocco, \$8.50.

From the standpoint of the practitioner, this book is a decided disappointment. The bacteriologist may find some comfort in the technical material it contains which is, indeed, excellently presented, the list of practical experiments in part 5 adding no small merit to the book. The advances of vaccine therapy of the last two years are almost entirely ignored, the subject of specific and non-specific

protein reactions is only casually discussed, and the intravenous administration of pneumonococcus and typhoid bacterins is only lightly passed over and the discussion of the negative phase is of no value at all.

TUMORS OF THE NERVOUS ACUSTICUS and the Syndrome of the Cerebellopontile Angle. By Harvey Cushing, M. D., Professor of Surgery at Harvard University. Octavo of 296 pages with 262 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$5.00 net.

The author's name at once commands respect and incites one's interest. As the author states the time is ripe for special studies of special tumors in special localities. This monograph does indeed present such a study and most exhaustively.

In style it is similar to his monograph on the tumors of the pituitary body. There is a wealth of clear illustrations, case histories. Most thoroughly does he discuss the pathology and symptomatology. The diagnostic features are given in detail and the treatment is imparted clearly.

It is an intensive educational effort that imparts a fund of practical information at the same time elucidating many points that were formerly beclouded and unexplained. The bibliography is in itself a compilation of exceptional worth.

An extended review is impossible. We urge and hope our readers will hasten to secure this work and acquire for themselves this mint of instructive discussion.

AMERICAN ADDRESSES ON WAR SURGERY. By Sir Berkeley Moynihan, C. B., Temporary Colonel, A.M.S., consulting Surgeon, Northern Command. 12mo of 143 pages. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$1.75 net.

The contents of this volume comprise the following addresses delivered by the author during his visit to America during the latter part of 1917:

The Causes of the War.

Gunshot Wounds and their Treatment.

Wounds of the Knee Joint.

Injuries to the Peripheral Nerves.

Gunshot Wounds of the Lungs and Pleura.

The author requires no introduction and these masterpieces comprise a valued addition to every one's library. They sum up the present understanding of the subjects discussed and as such impart the latest conclusions from the front.

We appraise this little volume as one of the foremost recent publications and one that will be greatly in demand.

DISEASES OF THE DIGESTIVE ORGANS WITH SPECIAL REFERENCE TO THEIR DIAGNOSIS AND TREATMENT. By Charles D. Aaron, ScD., M.D., second edition. Published by Lea & Febiger, Philadelphia and New York. Price \$7.00.

This book brings us fresh off the press a carefully written text-book on this very important branch of internal medicine. It is of especial interest to the

general practitioner who desires to do something for the hopeless, chronic neurasthenics who usually drift from one office to another, never truly bed-ridden and on the other hand, never in the happy buoyancy of good health and spirits. Every instrument and every method whereby diagnosis may be made more precisely and more certainly is thoroughly described. If we were to criticize at all it might be said that the book is written a little too much from the specialist view-point and that not enough is said to discriminate the true organic diseases from the functional disorders resulting from a primary disease in some other part of the organism.

The chapters on duodenal alimentation and examination of the feces are the best features of the book.

BLOOD TRANSFUSION. By Bertram Bernheim, A.B., M.D., F.A.C.G. J. B. Lippincott Co., Philadelphia and London. Price \$4.00.

Blood transfusion must be given a very prominent place among the new achievements of modern surgery. Not only is it a life saving measure in many emergencies but as Bernheim points out in this book, it may be used with excellent therapeutic effect in many otherwise hopeless cases. It is important that not only the surgeon should be well posted on this subject but the general practitioner should be equally informed as to the indications for transfusion. The difficulties in always making a diagnosis of hemorrhage are well described in this book. It is interesting to note the author's unqualified indorsement of the indirect method even though he painstakingly describes the other methods. The question of incompatibilities comes in for a thorough discussion.

THE SPLEEN AND ANEMIA. By Richard Mills Bearce, M.D., ScD.; Edw. Bell Krumbhaar, M.D.; Ph.D., and Chas. Harrison Frazier, M.D., ScD. J. B. Lippincott Co., Philadelphia and London. Price \$4.00.

From the same press comes another equally good book on blood diseases. While treatment is discussed in the latter part of the book, the reader will find the book interesting chiefly because of the light it throws on the pathology of this organ. A great deal of literature has already accumulated on the apparent relation of the spleen to both primary and secondary anemias. The authors have not only reviewed this but have added to it a report of the extensive investigations that they have carried out on the subject.

LOCOMOTOR ATAXIA. By Wm. J. M. A. Maloney, M.D. Edin., Fellow of the Royal Society of Edinburgh; Fellow of the New York Academy of Medicine; Fellow of the New York Neurological Society; Neurologist to The Central and Neurological Hospital; formerly Professor of Neurology, Fordham University, New York City. Published by D. Appleton & Co.

The striking feature of this book is the pleas-

ing and scholarly style in which it is written, a quality so frequently lacking in medical literature. Not only is it a clever presentation for the practitioner and student of this ubiquitous disease but we dare say that the neurologist, as well, will find the author's original ideas, such as his orthopedic appliances for the feet, valuable. The work is illustrated by several new and original drawings and photographs together with selected ones from other authors.

ESSENTIALS OF PRESCRIPTION WRITING. By Cary Eggleston, M.D. Instructor in Pharmacology, Cornell University Medical College, New York City. Second Edition. Reset. 32mo of 134 pages, Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$1.25 net.

The student will find this a handy reference that can be conveniently carried in the pocket. Few things reflect more discredit on a physician's scholariness than a poorly written, ungrammatical prescription. A perusal of this book leaves nothing to be desired for the attainment of all the points necessary for the writing of a proper prescription.

Miscellany

A SAFE ANTISEPTIC.

In view of the numerous reports of death and disaster following the use of bichloride of mercury and carbolic acid, it is a good thing to know that there is now available a germicidal agent which is even more efficient than these dangerous antiseptics, and which is safe. The medical profession owes much to the genius of Dr. H. D. Dakin, who has recently brought to its attention the great value of the chlorine-carrying compounds.

The most convenient of the antiseptics which he has introduced is para-toluene-sodium-sulphochloramide, best known in this country under the name of "Chlorazene." In Dakin and Dunham's "Handbook of Antiseptics," we learn that this antiseptic is more powerful, when tested on blood-serum-muscle-extract cultures of the staphylococcus aureus, than mercuric chloride, silver nitrate, argyrol, zinc chloride, hydrogen peroxide, phenol, and other common antiseptics. In fact, a 2 per cent. solution of this antiseptic will accomplish in five minutes what it requires twenty-four hours to accomplish with a 1-1000 solution of mercuric chloride.

The most gratifying fact of all is that the Chlorazene is safe. There is little or no danger of poisoning. Some of the uses of Chlorazene are as follows:

As a gargle or spray, in all forms of sore throat, and as a therapeutic and prophylactic agent in

diphtheria, meningitis, measles, scarlet fever, tonsillitis, etc.

In skin diseases. Eczema, acne, carbuncles, boils, paronychia, felons, and other common skin infections.

In wounds. Chlorazene may be used as a wash to infected areas, as an irrigant, on compresses, as a dusting powder (Chlorazene Surgical Powder), and as a paste (Chlorazene Surgical Cream).

In genitourinary diseases. As an application to venereal sores (chancre and chancroid), as an injection in the treatment of gonorrheal urethritis and gonorrheal vaginitis.

In obstetrics. Following delivery and to clean out the uterus in cases of sepsis. As a cleansing agent and deodorant in practically all diseases of women.

In cancer and malignant sores as a deodorant and germicide.

Samples of Chlorazene will be sent without charge to any physician, dentist, veterinarian or druggist in any part of the country applying to the home office of The Abbott Laboratories, Chicago. Complete literature of Chlorazene, Dichloramine-T, Chlorcosane, and other Dakin preparations, will be included.

In the *British Medical Journal*, October 20th, 1917, Dr. Carver, M.R.C.P., London, emphasizes the necessity of specifying a reliable brand of Thyroids and Thyroid Tablets. He called attention to the way in which some manufacturers label their preparations.

If the doctor will demand Armour's he will know that his patient gets a specific quantity of Thyroid tissues because we standardize our Desiccated Thyroids and Thyroid Tablets.

Each Thyroid Tablet (Armour) contains a certain quantity of standardized Thyroids and that amount of Thyroids represents five times as much fresh thyroid gland.

Whenever a preparation of any of the endocrine glands is required, the physician should specify Armour's and see that his patient gets Armour's.

The doctor prescribes a preparation for a certain purpose and he can expect results only from first class products.

Campho-Phenique.—The Secretary of the Harvard University Medical School received, from the Campho-Phenique Company of St. Louis, a letter stating that the concern wishes to supply the senior students of all medical colleges with samples of Campho-Phenique and Campho-Phenique powder, and ointment and asking the number of students and the name of every student in the graduating class. The Campho-Phenique concern believes in following the old advice, "Catching them young." In

1907, the Council on Pharmacy and Chemistry reported that Campho-Phenique (liquid) was exploited under a false "formula," that it was a solution of camphor and phenol in liquid petrolatum, and that for all practical purposes Campho-Phenique Powder was essentially a camphorated talcum powder containing apparently sufficient phenol and camphor to give the powder an odor. The report of the Council further brought out that the Campho-Phenique Company was in effect one of the numerous trade names adopted by one James F. Ballard. Mr. Ballard seems to market a number of "patent medicines," for some of which Dr. Ballard has pleaded guilty in the federal courts to making false and fraudulent claims. (*Jour. A.M.A.*, Feb. 9, 1918, p. 408).

Sodium Bicarbonate.—Few patients will object to the taste of sodium bicarbonate if the required dose is administered dissolved in a convenient quantity of cold water. The taste may be disguised by dissolving the sodium bicarbonate in carbonated water or else by adding a little sugar and lemon juice to ordinary water. Sodium bicarbonate may also be prescribed in the form of tablets. Though it is better that these be allowed to dissolve in the mouth, in most cases they are swallowed without discomfort. (*Jour. A.M.A.*, Feb. 9, 1918, p. 410).

Acetylsalicylic Acid and Phenyl Salicylate Incompatible with Alkalies.—In the presence of moisture, acetylsalicylic acid is decomposed by magnesium oxide (calcined magnesia), as is also phenyl salicylate (salol). Hence these drugs should not be combined with magnesium oxide in a prescription. (*Jour. A.M.A.*, Feb. 9, 1918, p. 410).

Arsphenamine.—No, this is not a new chemical; it is simply the name adopted by the Federal Trade Commission for the Hydro-chloride of 3-diamino-4-dihydroxy-1-arsenobenzene—in other words, salvarsan. The three firms which have been licensed to manufacture this drug are permitted to have their own trade names for it, but the official name "arsphenamine" must be the prominent one on the label of all brands. Hence physicians should at once make it a point to learn and use the name "arsphenamine." (*Jour. A.M.A.*, Jan. 19, 1918, p. 167).

Pyxol.—This is a proprietary preparation somewhat similar to the compound solution of cresol of the U. S. Pharmacopeia. In 1915 Pyxol was declared misbranded under the Insecticide Act. (*Jour. A.M.A.*, Feb. 23, 1918, p. 559).

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVII

GRAND RAPIDS, MICHIGAN, MAY, 1918

No. 5

Original Articles

ORAL SEPSIS.*

C. T. PANKHURST, M.D.

NORTH STAR, MICH.

Under the heading of Oral Sepsis there are several subjects I wish to consider: 1. Pyorrhea Alveolaris. 2. Alveolar or root abscess. 3. Decayed teeth. 4. Suppurative tonsilitis and peri-tonsilitis. 5. Nasal sinus suppuration. 6. Adenoids and 7. Postnasal catarrh.

Looking back a few years we can see a most wonderful change in our knowledge and opinions relative to the effect these various suppurations have upon the human economy. We formerly considered that decayed teeth, and suppurating roots, or gums, interfered with the patients health only insofar as they interfered with the proper mastication of the food. And the bad stomach that so often accompanied these suppurating processes were attributed to the same cause.

Not many years ago we thought that a tonsil to cause trouble must be markedly enlarged, and to relieve the trouble we used the gillitone on it, which procedure only made a bad matter worse. If these cases had follicular tonsilitis or enlarged follicles that kept filling up with that white caseous material we would very deftly curette these diseased follicles, or apply caustics in the hope of destroying this diseased tissue. These methods of treatment have been entirely discarded. Those men who are adept at the enucleation of the tonsil can not help but be impressed with the necrotic condition of the peritonsillar capsule, showing that the seat of the infection was so deep that the old

gillitone, curette, and caustics could never reach the source of the trouble which only a clean enucleation of tonsil and capsule in toto can do.

Nasal sinus infection was commonly called catarrh; or neuralgia if there was much pain associated with it. Chronic postnasal catarrh was thought to be unavoidable; due to bad climate and changeable temperature, while now we consider them an ever present source of ill health.

A few years ago we found many children backward, stupid, or lazy. Now we take these same children and remove a mass of necrotic adenoid tissue and they become bright, intelligent, and industrious children. Many a criminal career has been prevented by the timely removal of diseased and enlarged tonsils and adenoids. We are coming to recognize these cases of oral sepsis and to ascribe to them their proper value in the etiology of many systemic diseases.

This brings me to the point in this paper, and the one I wish most earnestly to call to your attention: The etiological factor oral sepsis plays in the production of many organic diseases.

Dr. Chas. Mayo read a paper before the National Dental Association and in his discourse he showed that great scourges such as cholera, yellow fever and plague, that in generations past ravaged the world, had been taken from the earth by medical science, and then as his climax he said that the present generation would not die from these plagues, they would die of some simple infection; that ninety out of every 100 probably would die of some simple infection, the result of some focal infection, which focus itself would give them no trouble.

*Read at the January meeting of the G. I. C. Medical Society by C. T. Pankhurst, North Star, Mich.

He then referred to the fact that 90 per cent. of the lesions of the focal infections are above the collar; and would include tonsils, antrum nasal sinuses and oral infections.

When Dr. Mayo comes out with the statement that the present generation will nearly all die from focal infection, directly or indirectly and 90 per cent. of these foci of infection are above the collar, it certainly behooves us to look well to our cases of oral and nasal infections if we expect to prevent or cure these cases in the future, instead of dopping them up and prolonging their misery as we have done in the past.

It has been said that 85 to 90 per cent. of infectious diseases gain access to the body through the mouth or nose, knowing this, it is easy to see how some of these germs may find a lodging place, perhaps, around a tooth where the gum has been injured by improper or careless cleansing of the teeth, or, in a decayed tooth, or in a deep crypt of a tonsil, or some place else in the nose or mouth where the mucosa has been abraded. They gain a foothold and if the person is slightly debilitated they gain such a start that the person is not able to rid himself of the infection. Many of these germs are of a low state of vitality, but very resistant to any method of destruction.

Following measles, scarlet fever, pneumonia, lagrippe and various other diseases you frequently find chronic tonsillitis; pyorrhea alveolaris; nasal sinus infections; and post nasal catarrh. Many people date the beginning of their ill health to one of the above diseases.

With a person in a debilitated condition we have the first requisites to oral sepsis; and an abraded mucosa from any cause constitutes the second requisite. When these germs are thus lodged, they produce a swollen and congested mucosa, the epithelium is destroyed and this allows others germs to contaminate the infection. As these germs grow they frequently produce an acid reaction in the mouth and this together with a change in the amount of oxygen, and the food of these organisms frequently so change their characteristics, that they become an entirely different organism. Dr. Rose-

nouw has shown that you can take the pneumonia germ and by modifying the amount of oxygen and by using different culture media you can completely change its morphological characteristics.

He has succeeded in changing the diplococcus pneumonia into a streptococcus, that in most cases would attack synovial membranes. Another streptococcus he produced from this same pneumococcus, he called streptococcus viridans, that nearly always attacked the heart valves. He also showed that certain streptococci had a predilection for the kidneys, causing parenchymatous nephritis; some varieties attack the mucous membrane of the stomach causing ulcer, others causing appendicitis. We know that the *Bacillus Typhosis* attacks Pyer's patches; that the pneumococcus most generally lodges in the lungs. These germs do not just happen to attack these various structures they lodge there and grow because they find there the substances necessary for their growth. All germs have a selective affinity for certain parts of the body.

Why is it that we have more appendicitis, neuralgia, arthritis, nephritis, inflammations of the heart, etc., during the winter and spring? We have thought in the past these things were due to bad weather and the cold, but we now know that they arise from an attack of tonsillitis or bad cold or the grippe. What a multitude of infections we class under the head of colds, or grippe, when, in fact most cases of colds and so called grippe are nothing more than an acute exacerbation of an old tonsillitis or post nasal catarrh or some sinus infection. Many a pneumonia is due to an acute flare-up of some oral or nasal infection, that by an extension soon involves the lungs. A person with a suppurative infection is just about as safe as a person sitting on a powder barrel playing with fire. You do not know how soon it is going to explode.

Many diseases can be directly traced from the primary focus of suppuration in the nose or mouth to the distant part of the body that is infected. Rosenouw and many other investigators, have, by finding the identical germs in both organs and by taking these germs and

injecting them into animals, been able to reproduce the disease. Appendicitis, ulcer of the stomach, nephritis; arthrititis; etc., have been thus proven. It is not always possible to find the original focus of infection, as this may have disappeared, or healed thus obscuring the real etiology.

I wish to quote from a paper by Dr. Price in the *Journal of the National Dental Association* of February, 1918. He says:

"If we take the amount of debris from a decaying tooth that would be represented by a milligram, an amount you could carry on the head of a pin almost, and count the organisms in it, you would have all the way from 10 to 250 or 500 million organisms."

When you realize that a milligram of material would only be a fraction of the total amount in the mouth, we get an idea of the amount of infection we are carrying around with us, and when you have one or more of the more virulent organisms, you can readily see that it is a tremendous strain on the patient's defensive forces to keep such an infection even smothered to say nothing about completely destroying it.

It has been estimated that in a bad case of suppurative tonsillitis or pyorrhea alveolaris there is from one to two tablespoonfuls of pus with billions of bacteria taken into the stomach and absorbed into the system every twenty-four hours. Is it any wonder we have people coming to us complaining of stomach trouble?

Dr. Hartzell states that if any one of us had an abscess area as large as a penny on our hand, our physician would be very careful to have it covered or protected, but, if we have an abscess area or pyorrhea pocket one-eighth of an inch deep around each tooth, how many square inches of suppurating area do you suppose we have? Four square inches. Now what surgeon or physician would allow such a patient to go for one moment with that much suppurating surface from which infection can come, and yet we pay little attention to it because it is in the mouth.

The same applies to suppurative tonsillitis, or peritonsillitis, or nasal sinus infections, or

post nasal catarrh. In these cases there is an immeasurable amount of pus and toxins flooding the system, that is, over-taxes the stomach to sterilize this great amount of pus and leads to a gastric catarrh and lack secretion, the liver is over worked breaking up these foreign proteids, and toxins, the toxins irritate the nerves and lead to neuralgia and neuritis. The suprarenal secretion, together with the hemoglobin, form the opsonins; and thus these structures are over worked and produce a great variety of symptoms and trouble, all leading toward a decline in health and a greater vulnerability to disease.

All this evidence points to the conclusion, that we should not try to cure a bad stomach, or inflamed, or diseased heart, with medicine alone but should clean up the mouth and nose. If there are bad teeth have them pulled or filled. If you have a case of arthritis or so called rheumatism, look for the source of the trouble in the tonsils or around the teeth.

If we stop thinking about these various diseases as simply inflammations, and think of them as an extension of an infection from some other part of the body, and then set about to locate and destroy that source of infection, we are able to do our patients some real good, because we arrest the trouble at the source.

To recapitulate: I wish to again call your attention to the close relation of these foci of infection in oral sepsis to many of the distant and more grave constitutional diseases. The time has come when we must cease to think of nephritis, appendicitis, arthritis, neuritis, etc., as a primary pathological entity, but must consider them as a complication or extension of some focus of infection in some other part of the body and, as 90 per cent. of these foci are in the mouth, nose or throat, we should look there for the exciting cause of our malady, and the point of attack where we should center our efforts of treatment.

It does little good to give a person digitalis to strengthen a bad heart when you allow oceans of toxins from diseased teeth to keep pouring into the circulation to annul all your good efforts and millions of bacteria are taken into

the stomach, and many find their way directly into the circulation, to keep some distant infection constantly active by reinfection.

We have long known that carcinoma and sarcoma can reproduce themselves in some distant part of the body from a microscopical piece of the parent tumor which has found its way into the blood stream or lymphatics and lodged in some distant organ. Is it any less reasonable to think that nephritis, or some of these other diseases can be produced from a small particle of necrotic tissue or mass of bacteria that have become detached or found their way into the circulation from some suppurating tonsil?

We all have patients who come to us every little while for a bad cold. They complain of catching cold every time they go out of doors. Now, if you take the pains to investigate, you will find that in most cases, these attacks of catching cold are nothing more or less than an acute exacerbation of a chronic tonsillitis, or post-nasal catarrh, and in these cases by removing the diseased tonsil and curing up the catarrh you not only add materially to your recompense but also obtain the gratitude and praise of your patient, when by a little extra effort and pains both patient and practitioner are benefited.

As we have ceased to think of the world as a lot of independent and separate states and have come to see that these various states are all interdependent one upon another, so also stop thinking of diseases as pathological entities and think of them as being interdependent upon each other for their production and continuation.

EVOLUTION OF NURSING.

EARL I. CARR, M.D.,
LANSING, MICH.

Nursing, the most feminine of remunerative vocations, is, indeed, a modern profession. Its development is within eighty years and its greatest progress is within forty. In November, 1882, there appeared in the *Century Magazine* an article entitled, "The New Profession for Women." It dealt with nursing and de-

scribed the Bellevue Training School (New York) then ten years old. As an occupation, nursing is old, but for influences, to be mentioned, opportunity for training did not present until the nineteenth century.

Religion, war and science are three great dominant factors which stand out conspicuously in a review of the evolution of nursing and their influence was greatest in the order named. It was because of motives of piety or on account of a sense of a religious duty that led, during the early centuries, to caring for the sick, most of such efforts being allied with the church in rendering together both bodily and spiritual aid. A consciousness of the need for better care of sick and wounded soldiers later created new impetus for more competent nursing. War had its influence, too, by causing large numbers to become widows and orphans who turned their attention to nursing, giving rise in one instance to the Order of Beguines, "lay sisters, bound by no permanent vows, but simply pledged for the time being to serve the ailing and needy." Within recent years, mostly during the last half century, science has dominated when curricula have been outlined in Hygiene, Anatomy, Physiology, Materia-Medica and Ethics for candidates for this profession and proficiency has been demanded.

In early Greek history reference to nurses who took charge of infants and children may be found often, but that they acted in other capacities there is little said. Monuments were erected to nurses by grateful children. Attention has been called to the utter disregard for hygienic laws and the great dependency upon nature, all effort being directed toward having the sick one continue the usual food and drink and routine of life.

St. Paula, a Roman patrician lady, devoted herself and wealth to the care of the sick. For want of sympathy, she left Rome for Palestine, and at Bethlehem she established in the fourth century a little hospital where the sick poor and sick pilgrims were cared for by herself and those she had gathered about her. Later she built on the road to Jerusalem an hospice for sick pilgrims and a monastery for her master

Saint Jerome. Paula and her women were not cloistered nuns but they lived austere, religious lives. Fabiola is another Roman patrician lady who, in A. D. 380, founded a hospital in Rome for the care of the sick poor. Empress Facilla also visited the sick. From the efforts of these and others and because, during the reign of Honorius, A. D. 395-423, it is stated that six hundred women were engaged in hospitals of Alexandria, all governed by religious orders, it seems evident that there was in the fourth century a movement for organizing nursing.

Further development of nursing came with the establishment of general hospitals which, still continuing the idea of holy work, were named *Hotels-Dieu*. The first was established at Lyons in 560 A. D. and a hundred years later another was founded at Paris. These differed from the pilgrims hospices and monastic infirmaries but were under the influence of the church. The nursing staff was composed of hospitalieres or nursing sisters, not nuns, whose novitiate was one year. They became an important body and Pope Innocent IV. gave them recognized position and placed them under the Augustine Rule. Hospitalieres pervaded Christendom and for five hundred years were the only organized nursing sisterhood. They were probably the earliest nurses in England, for at the dissolution of the monasteries, the oldest hospital of England, St. Bartholomew's, founded in 1123, had, for its nursing staff, sisters under Augustine Rule. Other sisterhoods sprang up as Grey Sisters, and Sisters of St. Elizabeth. In the Netherlands the Beguines became a great organization and had a house with six hundred nursing sisters at Ghent.

From 1525 to 1540 occurred the dissolution of the monasteries, and in England shortly after this St. Bartholomew's and St. Thomas', general hospitals, and Bethlem, for lunatics, were given in charge by Henry VIII. to lay governors who employed a matron and hired women for nurses.

In England, nursing was no longer a religious vocation and, being poorly paid, it came to be regarded as menial service and attracted only paupers, drunken and the inefficient. Hos-

pitals were used by the poor and there was no provision for the sick rich. The religious incentive still prevailed in France where more humane care was given the sick than in England, but there was little or no tendency towards progress.

Early in the seventeenth century there was founded in France, by St. Vincent de Paul, an important new organization, who established throughout the civilized world numberless hospitals and homes for the sick and some two thousand homes as centers for its sisters. When the modern nursing movement began in the middle of the nineteenth century there were about twelve thousand Sisters of Charity at work in this organization of St. Vincent de Paul.

John Howard, in his prison work in 1770, found almost no provision for sick criminals. The Castle at York had one small room used as an infirmary. In the famous Hospice of St. Jean de Jerusalem at Malta, Howard found that patients were attended by the raggedest, dirtiest wretches he had ever seen, and that there were only twenty-two of them for five hundred patients.

The French Revolution and Napoleonic Wars filled hospitals with mutilated young men, flowers of their communities, not despised paupers, and this effectively aroused the public conscience. In 1819 the French bureau of administration started the training of soldier's orphans for nurses, but the effort failed on account of the rudimentary training and low wages, which were eight to twelve francs a month.

In 1825 organized training was discussed by English publications as, *Blackwoods*, the *Quarterly*, the *London Medical Gazette* and *Southey's Colloquies*, in which pleas for a better class of persons to care for the poor were made. A house was hired in Liverpool by Mr. Hornby and Adam Hodgson, with a matron placed in charge of women who were sent out as nurses. These women became sought after as monthly nurses for the upper classes and the whole scheme had to be abandoned.

A similar expression, led by Pastor Fliedner

in Germany in the founding of the Kaiserswerth system, an order of nursing protestant deaconesses, had a far reaching and lasting influence. The Kaiserswerth Deaconess Institution, originally a shelter for homeless women discharged from prison, was started in 1836 as a hospital and training school. England owes much to it. Florence Nightingale acquired her practical knowledge there. Probably Kaiserswerth should be credited with being the first of the modern training schools for nurses.

The starting of Institutions for Nursing deaconesses on the continent at Strassberg, Utrecht, Berlin, Breslau, Königsberg and the founding of the Society of Friends in Philadelphia in 1838, the Institution of Nursing Sisters in London in 1840, the opening of St. John's House by the church of England in 1848, are some of the other landmarks of activities and progress during the first half of the nineteenth century.

A work and example which conspicuously influenced modern nursing is that of Florence Nightingale. She was born in 1820 in Florence, while her parents were sojourning on the continent. She was reared according to the best traditions and was educated far in advance of her time. In 1849 she entered Kaiserswerth. In 1854, through a strange coincidence of being invited and of her volunteering, she started the Crimean War Hospital organization with the aid of thirty-eight nurses obtained with difficulty. Her reform of field hospitals, which up to her time had improved but little since they were first established by Queen Isabella at the siege of Granada, made her famous over the civilized world. In recognition of this national service the British public raised money by subscription for the erection of a hospital, but at her suggestion the Nightingale Fund School was founded instead. This was in 1860 and was the beginning of the hospital school system in England.

America had not advanced farther, for in the *Journal of Congress*, October 9, 1776, there appears a resolution "that the wages of nurses be augmented to a dollar a week" and during the Civil War, nursing was left to Sisters of Charity, convalescent patients and untrained

women. Kaiserswerth's great influence extended to America for when Dr. Susan Dimock returned from Germany to take charge of the New England Hospital for Women and Children in Boston, she inaugurated the principals of that institution in a new school for the definite purpose of training young women in general nursing. This was America's first Training School for Nurses and was opened September 1, 1872. The course was for one year.

The Bellevue Training School for Nurses opened in New York in May, 1873, and in the fall of the same year Massachusetts General Hospital opened a school in Boston. Many graduates from these schools became superintendents of the new schools which quickly sprang up throughout the country.

Nursing Societies have been formed and have done much toward the elevation and advancement of the profession. To science is given much credit for progress. In 1901 the Associated Alumnae of Trained Nurses had a membership of four thousand and the Society of Superintendents of Training Schools for Nurses in the United States and Canada had one hundred twenty-four members.

Today there are three national organizations for nurses; the American Nurses Association to which every trained nurse in good standing supposedly belongs, the National League of Nursing Education, with a membership of about five hundred, and the National Public Health Association, composed not only of nurses but of hospital officials as well.

There are two national journals for nurses. The "*American Nurses Journal*" is edited and managed in every way by nurses and is the official organ of the American Nurses Association. "*Trained Nurses*" is edited by lay people, although nurses are included in the managing organization.

Legislation has provided for State Boards of Registration in nursing, who prescribe requirements, study and experience for candidates, and proof of knowledge by written examination in each of the several sciences.

128 West Allegan St.

TRANSACTIONS

OF THE

Clinical Society of the University of Michigan

Stated Meeting, February 6, 1918

The President, JAMES G. VAN ZWALUWENBURG, M.D., in the Chair
Reported by REUBEN PETERSON, M.D., Secretary

REPORT OF A CASE OF CICATRICIAL ECTROPION CORRECTED BY PLASTIC OPERATION.

GEORGE SLOCUM, M.D.

(From the Ophthalmic Clinic, University Hospital, Ann Arbor, Michigan).

H. H., aged 35, entered the Clinic of Ophthalmic Surgery of the University Hospital December 4, 1917. The lower eyelid and face below the outer angle of the eye were burned when ten years of age,

Examination.—Marked cicatricial contraction of the lower lid O. D., the deformity so great that the eye lashes touched the cheek, the outer half of the lid showing the greater deformity. There was a marked hypertrophic conjunctivitis, the exposed mucous surface presenting a marked convexity forward, a condition which nearly always follows prolonged exposure of the palpebral conjunctiva.

December 6, 1917. Plastic operation. Incision along the lower lid border about 2mm. from the

removed from the temple turned down and sutured in position filling the gap caused by the restoration of the lid to a normal position, no tension on the flap being permitted. The denuded area was covered by undermining the adjacent skin and suturing.

Figure 1 represents the position of the flap taken

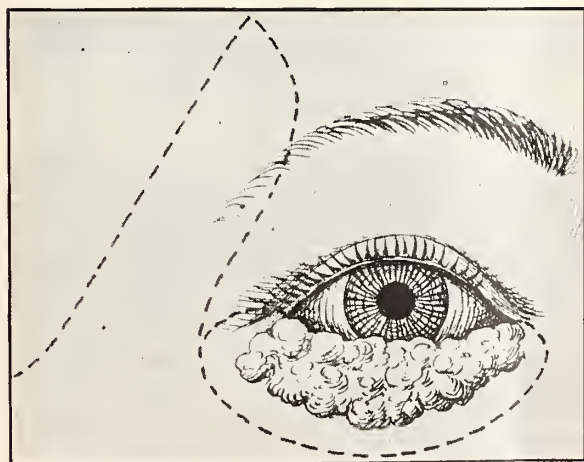


Fig. 1. Position of flap in this case. Blasius operation. (After Beard).

eye lashes extending to just below the puncta lacrymalis, dissection carried up toward the orbital margin, freeing the lid to septum orbital until it could be restored to its normal position. Blasius flap

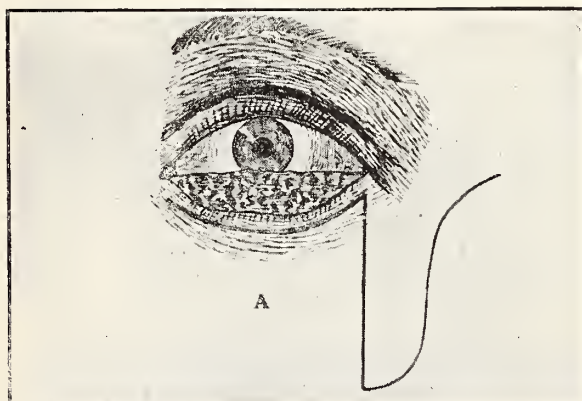


Fig. 2. Von Lagenbeck's operation for ectropion. A. Incision. Ball's Ophthalmology.



Fig. 3. Von Lagenbeck's operation for ectropion. B. After suturing.

as in the Blasius operation from the temple near the eyebrow. Figure 2 represents the incision along the eyelid border after Von Lagenbeck, freeing the lid border from the cheek so that it could be re-

stored to its normal position. Figure 3 represents the appearance of the flap in position in the Von Lagenbeck operation in which the flap is taken from the cheek. The operation performed in this case is a combination of the Blasius and Von Lagenbeck operations. From this operation a partial restoration of the lid was obtained, but owing to too great laxity of the lid border and the hypertrophic conjunctivitis, the deformity was changed from a

near the center of the lid to the outer canthus. Next, the skin is divided from the outer canthus outward and well upward ten to fifteen millimeters; from the outer extremity of this incision a second incision is continued downward about fifteen mil-

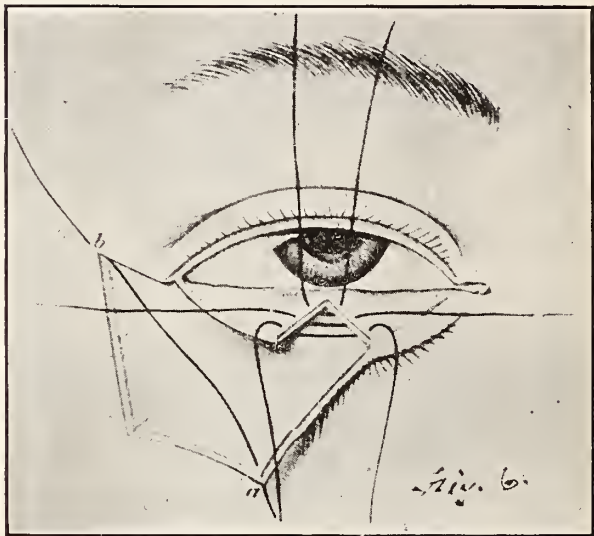


FIGURE 6.

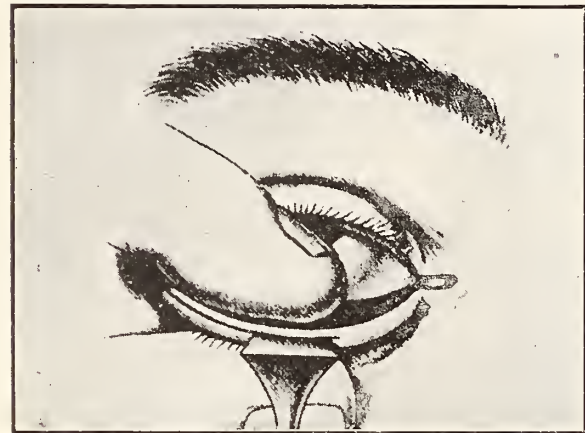


FIGURE 4.

cicatricial ectropion with marked stretching and displacement of the whole lower lid to a flaccid ectropion with hypertrophic conjunctivitis. After the flap had entirely healed the hypertrophic conjunctiva was reduced by treatment with alum pencil. When palliative methods fail in hypertrophic conjunctivitis the hypertrophy may be reduced under cocaine anesthesia by the Ziegler cautery operation which consists in making a series

limeters, the trend of the incision being mesialward until nearly below the outer canthus where it turns at an acute angle up to the outer canthus. The wedge shape piece of skin thus outlined is removed; the skin of the lower lid is now dissected downward until the outer angle of the undermined skin can be carried outward and upward far enough to cover the denuded area. A wedge shaped piece of mucous membrane is next removed from the mesial portion of the conjunctivo-tarsal flap. Sutures are introduced in the borders of this wedge shaped area so that they may be tied on the conjunctival surface. The skin flap is next sutured in place filling the

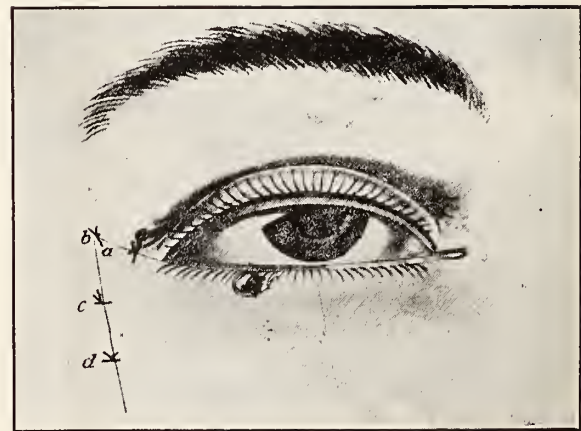


Fig. 7. Kuhnt-Szymanowski operation. Appearance after the operation. The lower lid lies in its proper position; 4 (ab., c., d., e.) sutures suffice for the fixation of the flap. The suture for the fixation of the skin to the tarsus is tied over a bead (f).

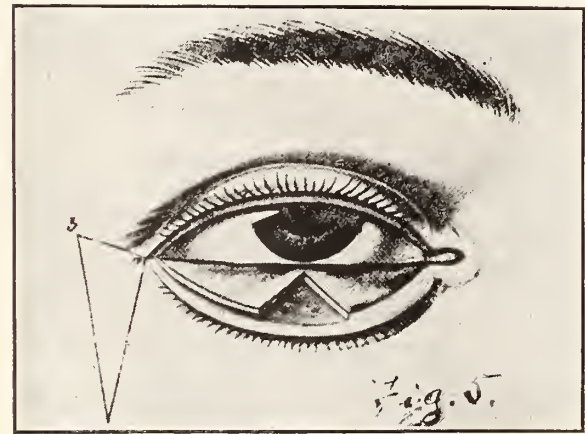


FIGURE 5.

of cautery punctures in the hypertrophic conjunctiva paralleling the lid border about 3 mm. from the sharp inner margin. **Second Operation.**—In this case the remaining flaccid ectropion with the hypertrophic conjunctivitis one-half to two-thirds reduced, was corrected by means of the Kuhnt-Szymanowski operation. The technic of this operation may be outlined as follows: The eyelid is split along the intermarginal line from

denuded area beyond the outer canthus: a through and through suture holds the conjunctival and skin flaps in coaptation and prevents separation by clots

or exudate. Border sutures may unite the skin and mucous borders of the lids when it seems advisable, provided they are not allowed to remain longer than forty-eight hours. If they remain much longer they are liable to cut and produce fissuring of the lid border. Figures 4, 5, 6 and 7 taken from Meller's Ophthalmic Surgery, show the steps of the operation.

The photographs below show the condition before each operation and the final result.

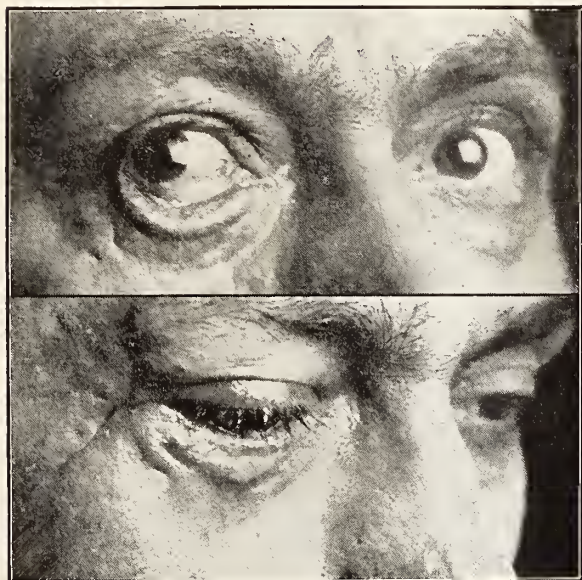


Fig. 8. Before first operation and after second operation.

DISCUSSION.

DR. ROBERT H. BAKER: I would like to ask Dr. Slocum what suture material was used on the conjunctival surface.

DR. SLOCUM: No. 1 silk.

DR. BAKER: How do you control the irritation against the eyeball?

DR. SLOCUM: There is very little irritation if small sutures are used.

DR. PEET: Do you use vaseline on your sutures?

DR. SLOCUM: No. I can see no objection to its use, however; the mucous secretion covers the sutures very quickly and the patient is not usually annoyed by their presence.

I might explain why we did not use a skin graft. The Tiersch graft is so thin that it gives but little support. They are, therefore, most successful when support is not needed, particularly in the upper lid. In this case we not only had a deformity to correct, but in addition a tendency of the lid to drop down from the greatly increased weight; the orbicularis muscle was to a large degree atrophied and there was marked loss of skin area due to cicatricial contraction; it was, therefore, essential that the lid should be supported from below. Because of the increased length of the lid and the stretching of the outer canthus, the second operation was necessary

in order to hold the lid against the eyeball. In ordinary ectropion, due to laxity of the tissues and rolling outward of the lid without shortening of the skin below, the second operation would be sufficient.

DR. MAX PEET: This is certainly a beautiful result of a plastic operation. I firmly believe in the use of pedunculated flaps in preference to skin grafts where they can be used. Skin grafts have a habit of not growing sometimes, and with pedunculated flaps you can have thick flaps. The only way you can get this in a skin graft is to use the Wolfe grafts and they are poor to take. For ordinary skin grafting the Tiersch or Reverdin grafts are about all we have outside of a pedunculated flap such as was used here. And certainly for a condition of this type, using either Tiersch or Reverdin grafts could not give as good a result as has been obtained. The Reverdin graft especially would be useless because you would simply have a mass of small points of skin, some of them growing, and some not, with spotting, the old skin white and the new skin bluish. Some do not like the Reverdin graft and regard it as useless. Personally I think we have cases where it is very useful. However, in eye work it seems to me that pedunculated grafts such as this would give the very best results. I could not ask for a better result than Dr. Slocum has obtained in this case.

REPORT OF A CASE OF AN ENORMOUS POSTOPERATIVE VENTRAL HERNIA.

LESLIE L. BOTTSFORD, M.D.

(From the Obstetric and Gynecologic Clinic, University Hospital, Ann Arbor, Michigan).

Small or moderate sized umbilical or ventral hernias are of common occurrence and are usually easily repaired, although at times a large area of skin and fat is necessarily removed.

Enormous ventral hernias, as well as the inguinal, scrotal, femoral and labial varieties, are relatively uncommon and present an entirely different operative problem. Even if operable, they are associated with a very high mortality and morbidity. In the cases of large or massive and below the enormous ones, the estimated death rate has been placed at 6 per cent. (McGannan). However, when strangulation or obstruction, is added, the mortality in massive hernias reaches nearly 50 per cent. Correspondingly we should expect even a higher rate for the enormous type, one of which I wish to present.

In the usual simple hernias postoperative treatment extends over about 18-21 days; in massive hernia, 50 days; and after enormous hernias, from 50-150 days. The causes of

mortality in the enormous hernias have been classified by Hewitt into several groups.

I. Those due to cardiovascular-renal conditions, acute dilatation of the heart, apoplexy, uremia, pulmonary edema, embolism and thrombosis.

II. Postoperative abdominal conditions: obstruction, acute dilatation of the stomach, peritonitis, and suppuration of the abdominal wall.

III. Those due to strangulation: toxemia of obstruction, peritonitis from ruptured and gangrenous bowel and embolism of the mesenteric arteries.

IV. Shock due to loss of blood, anesthetic, exposure or manipulation of the hernial contents.

Of these various dangers, probably the most usual one encountered is acute cardiac failure. In enormous hernias, since the patients carry a considerable portion of the abdominal viscera outside the normal habitat, there is a consequential loss of pressure on the large splanchnic vessels, resulting in their dilatation and associated with compensatory changes in the general circulation, which sustains the blood pressure. In addition, most of these patients have some cardiovascular-renal disease, which also further embarrasses the heart.

When an attempt is made to return the protruded viscera to the abdomen, followed by repair of the hernial opening, a readjustment of the vascular conditions in the abdomen must occur. Before the latter can be effected, the heart must overcome a great increase in its ordinary burden, and if any myocardial degeneration is present, rapid dilatation usually follows.

Again, in returning the viscera to the abdomen, the intraabdominal pressure is necessarily enormously increased, following which jaundice or gastrointestinal hemorrhage, with or without perforation, may ensue, even though the heart temporarily upholds the added burden and withstands the marked engorgement of itself and the lungs.

To these dangers must be added all those previously mentioned, and as a result, it can be readily understood that the operative mortality must be high, even in selected groups of cases.

Barker, in speaking of voluminous hernias, advises rest in bed, limited or restricted diet, and daily attempts to reduce the mass partly or wholly. When these methods fail, he rejects the patient, as unfit for operation. He also

strongly recommends local and spinal anesthesia, in view of the consecutive lung, liver, and kidney troubles.

Rest in bed, blood pressure, pulse readings and phthalein estimations with careful urinary observation for twenty-four hour periods prior to operation are of value. A snugly fitting abdominal binder, which is gradually tightened, while the blood pressure, pulse, and respiration are observed, is sometimes of aid. Preliminary treatment along these lines may be carried on for several weeks preceding operation.

I shall not discuss the various types of operations which have been devised for the cure of these hernias, more than to mention them. The type of operation most suitable must needs be adopted for each individual case. They have been treated by extensive flap formation with layer to layer or overlapping suturing: either alone or combined with no less extensive muscle and flap sliding; or by antoplastic fascial transplants; or by pedunculated fascial flaps; or by the re-enforcement of such areas by the use of the various wire filigree screens.

In addition to these, we have Haynes' inversion of the hernial sac by interrupted sutures with coaptation and union of the abdominal wall adjacent to the hernial orifice. The sac may or may not be opened for the placing of the first sutures, as seems desirable.

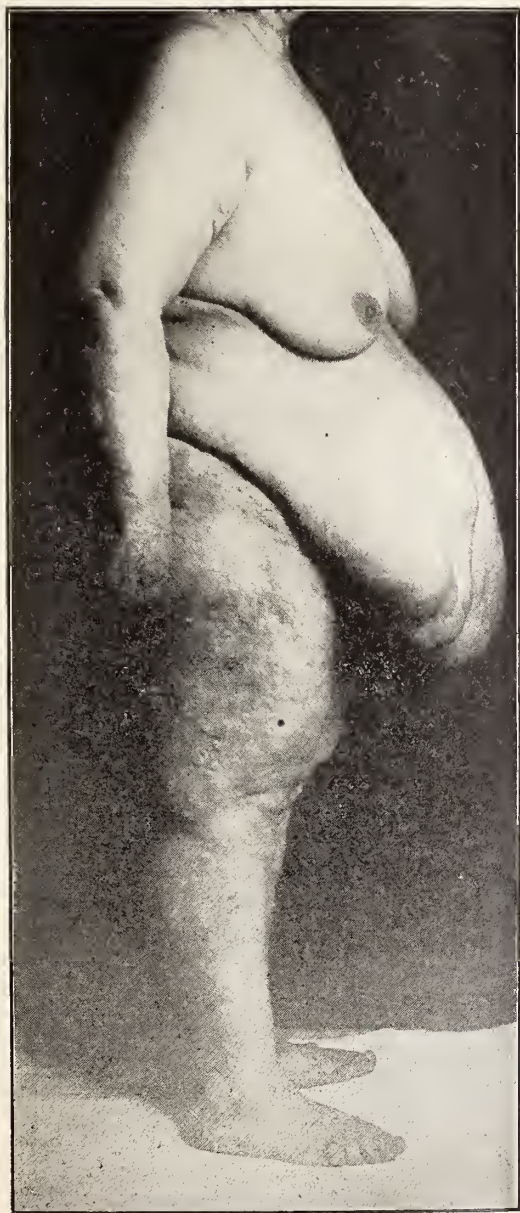
Hewitt in a recent article advises colectomy with subsequent end-to-lateral or end-to-end anastomosis of the ileum and sigmoid, removing in this way a large part of the mass to be returned to the abdomen. Portions of the omentum may be also removed, but the removal of a large mass of omentum may so damage by embolism the circulation of the stomach walls, that ulceration and hemorrhage will follow.

These patients with enormous ventral hernia are usually obese, averaging from 200-300 pounds. The hernias are usually postoperative below the umbilicus, and have existed for some years, operation usually being sought as a last resort to secure relief from intestinal disturbances and the drag, pain, or discomfort of the mass. The sac may be single or multilocular and the hernial orifice varies greatly in size the largest on record as repaired being eight by five inches in its longest and broadest diameters.

In a hasty review of the recent literature, I have been unable to find a case as obese or with as large and complicated a hernial mass as the one I wish to present.

CASE REPORT.

This patient is 49 years of age and presented herself for examination Oct. 26, 1917. Her parents and near relatives have all been very obese, weighing from 225-315 pounds. When seen in the Clinic the patient weight 356 pounds, having gradually increased in weight from 160 pounds since 1900. Her history is entirely unessential except from an operative standpoint and this is based upon her personal statements. In 1904 she underwent a



laparotomy at which time a fibroid tumor of unknown attachment and weighing 39 pounds was removed through a transverse incision below the umbilicus. She was reoperated in 1907 and a second fibroid weighing 40 pounds removed. In 1909 she was delivered by abdominal Cesarean section of a 7½ pound infant and immediately following the Cesarean, a tumor weighing 42 pounds was removed. Both of the latter incisions were above the umbilicus. Three months following the last operation, the patient began to develop a hernial mass in the midline slightly below the umbilicus, which has

gradually increased in size up until the present, now occupying practically the entire abdomen and forming a pendulous mass, which falls nearly to knee level when she is on her feet. The large, distended loops of intestine are clearly seen in the photograph lying just beneath the skin. During these years she has had no trouble except for some tympanites at times following errors in diet, and the inconvenience from the size and location of the mass itself. The bowel movements have been perfectly regular and her appetite voracious. When asked why she sought surgical advice, she volunteered the information that she was tired of carrying the mass around, inasmuch as she had to perform all her own household duties.

Needless to say this is a truly inoperable case from several standpoints: First, from the size of the hernia, for it was impossible to palpate any limits to the hernial orifice; secondly, the intestines were all greatly dilated and apparently tensely adherent to the sac; thirdly, the patient was of the cardiovascular-renal type with a serious hypertension. All three of the factors definitely contraindicated any operative interference. Some years ago surgical aid might perhaps have been rendered.

REFERENCES.

1. Haynes, I. S. "Giant Ventral Hernia." *New York Medical Journal*, 1917, CV, 107-112.
2. Hewitt, W. R. "Enormous Hernia." *Surgery, Gynecology and Obstetrics*, Chicago, 1917, XXIX, 215-221.

DISCUSSION.

DR. CYRENUS G. DARLING: In discussing this paper I want to speak of some of the objections which have been raised, not particularly to this case but in relation to ventral hernia in general. One must not say that any case of ventral hernia is inoperable until he has carefully studied the patient and learned something of the size of the opening, the amount of tissue that has been destroyed, or rendered useless for approximation in the particular case, or knows something about the cardiovascular system and is sure that the cardiovascular condition does not depend upon the method of life of the patient rather than upon a particular disease.

The death rate in ventral hernia has probably been exaggerated because of the lack of preparation before the operation is done. The success of such an operation depends largely upon these two things.

There is one point upon which the doctor touched slightly and that is the choice of an anesthetic. He mentioned the use of spinal anesthesia. Now, the use of ether as an anesthetic may not be proper in these cases and in cases where I had any fear of ether being a contraindication, I have used gas anesthesia. In one case where two operations had been done and both of these torn open by the patient vomiting for a week after an ether anesthetic, I used gas without any disturbance whatever and with a perfect result as far as repair of the hernia was concerned, and I have used gas in several other cases since to avoid the accident of vomiting, or in case there should be any renal disease.

Another complication which may lead to a fatal result is edema of the lungs or pneumonia, which Mayo pointed out years ago in operations for umbilical hernia, as being due to the restricted respiration brought about by bringing the parts together.

This is true in those cases which are repaired by bringing the lateral sides together in the median line rather than transversely. So we find that if we are to be successful in the repair of ventral hernia we must avoid this longitudinal repair as much as possible, depending upon a partial transverse closure even if the general opening is longitudinal.

There is no reason why a person with a great amount of fat cannot lose a great deal of it by rest in bed and diet. This may also have the effect of pressure upon the vessels within corrected to a certain extent if the tumor or pressure is reduced and a properly adjusted binder is applied. The patient in the course of four or five weeks will become accustomed to this pressure. The trouble is that very few of these persons find their hernias sufficiently bad to submit to this treatment. A ventral hernia which has existed for a long time has probably led to atrophy of the abdominal structures and the loss of abdominal compression upon the abdominal contents has allowed the fat to increase and distention to increase, and we must carefully get rid of this distention if we are going to bring about a good result.

The next thing to consider in the operation will be the method of securing sufficient tissue to bring about a good repair. Mention was made of the use of the hernial sac as part of this tissue. Now the hernial sac may be used for this purpose, but in no instance should a hernial sac be so used unless the hernia has been opened and it has been ascertained that there are no adhesions to the sac or to the ring. After you have found all the underlying tissue separated from the sac, there is no reason why you should not employ this for the purpose of building up a wall. The method of forming a transverse approximation should next be considered, as very few of these incisions are made transversely. Nearly all of them are longitudinal, and mostly below the umbilicus. The hernia as it is formed may be a round opening. In approximating this you can usually, by putting stitches in, from above downward, and tying them, bring the lower part nearly to the upper, converting this almost into a transverse incision. The object is to allow more space anteroposteriorly than is possible if you approximate from the other direction. In doing that you will probably bend upon themselves the recti muscles, but while you are shortening them you are bringing them in towards the median line, and I think the success depends upon getting the approach to the transverse coaptation.

The next important point is in maintaining this position. We have used kangaroo tendon, chromicized gut and silver wire. In most of the cases where I have used silver wire I have obtained very good results. Some of the sutures are buried and some are put in on the outside as stay sutures and are allowed to stay for two or three weeks. These act as a support to the wall. They may be placed back through the skin and through the tissues and brought out some distance below. We usually have two of these some distance back on either side and they are then tied around a piece of gauze. These act as regular splints for the support of the tissues during the time of repair and it matters not which way you apply them, ac-

cording as the conditions demand. I have found that by using these supports during the period of formation of tissue or repair, I have been able to maintain it much better than by any other method. Even in cases of suppuration where I have been obliged to work upon infected tissue, I have succeeded in getting results with these supports. So I look upon these silver wire sutures as quite essential in the process of repair.

I think that any type of operation is applicable. I see no reason why, if tissue is wanted, we may not import a fascial flap though I believe that transplanting fascia here is liable to lead you astray in not using tissue at hand. In making a layer dissection you can treat the layers between the superficial fascia as one layer, or you can use them separately. You make your approximation usually with the deep fascia and bring the muscular layer over perhaps using two layers to get a good approximation.

Ventral hernia should be repaired as early as possible after its discovery before it reaches the enormous size shown here. It should never be permitted to go so far before repair has been undertaken unless there is some unusual reason for leaving it. The death rate associated with ventral hernia as given in the text books is misleading. You are told of various accidents which apply to any abdominal operation and they are put up against ventral hernia. You might say that if you had carefully selected cases you could lower this death rate to one per cent. If you were to take a hundred cases such as the one exhibited here and attempt to operate upon them your death rate might be a trifle over 6 per cent. Ventral hernia is no more a dangerous operation so far as the operation itself is concerned, than other forms of hernia of equal size, and if you had all of these other complications which have been mentioned as the cause of the high death rate, you would not care about operating those cases even with ordinary inguinal hernia. If you operate recklessly all cases of hernia as they come along, you will have a 6 per cent. death rate, no doubt. It would be misleading to say that that should occur of itself if you kept in mind the danger of the anesthetic, the method of approximation, the preparation of the patient prior to operation, the care in approximating the tissues without including in your sutures any of the gut or omentum, and if you don't leave spaces between your sutures where a piece of gut may get in and form an obstruction. All depends upon the care with which you do the operation.

SYPHILITIC PARALYSIS OF THE FIFTH CRANIAL NERVE.

CARL D. CAMP, M.D.

(From the Neurologic Clinic, University Hospital, Ann Arbor, Michigan).

Isolated paralysis of one of the cranial nerves as a manifestation of syphilitic infection is not infrequent in the cases of the third and sixth nerves and in fact, in the case of the former, is so frequent as to justify the statement of Fournier that "paralysis of the third nerve is

the sign manual of syphilis." There are a few other causes of third nerve palsy. In the case of the sixth nerve the number of cases is even greater but owing to the fact that there are so many other causes of sixth nerve palsy it is not diagnostic of syphilis. The fourth cranial nerve can also be paralysed in syphilis but the recognition of the condition is not so easy as in the case of the first two mentioned.

The other cranial nerves seem to be much less frequently affected although a slight disturbance in the function of the eighth, a shortening of bone conduction, is common. Facial, or seventh nerve palsy, is much more frequently due to syphilis than is supposed and I have seen six cases of it in the past two years. It usually occurs in the early stages of the infection and is transient.

Fifth nerve palsy due to syphilis seems not to be well known, though there are a number of references to its occurrence in the literature. As in the case of the other cranial nerves there seems to be two distinct types of involvement; the first occurs soon after an infection and is usually isolated and transient, yielding readily to treatment; the second occurs late in the disease, is usually accompanied by other paralysis and is resistant to treatment. This second type is the kind reported as occurring in association with tabes. In 1905 I called attention to the implication of the fifth nerve in cases of tabes examined pathologically (*Univ. of Penna., Med. Bull.*, Jan., 1905) and said "The involvement of the fifth nerve is not very uncommon in tabes. Spiller has seen a degeneration of the fifth nerves in at least four or five cases studied pathologically. Most authors refer to the painless dropping out of the teeth in this connection. According to v. Leyden and Goldscheider the first cases were reported by L'Abbe (1868) and by Dolbean (1869). The falling out of the teeth is followed by the atrophy of the alveolar processes of both the upper and the lower jaws. Necroses of the jaw may occur and sequestra form. The process is at first painless, but infection usually occurs later. Sensory disturbances in the distribution of the fifth nerve may or may not be present. The most frequent pathologic finding is a degeneration of the descending spinal root of the fifth nerve." At the same time I reported a case of tabes in which one of the symptoms was recurring attacks of herpes zoster in the distribution of the fifth nerve and this was followed by painless falling out of the teeth.

In 1910, Dr. William G. Spiller and myself

reported a case of syphilitic paralysis of the trigeminal nerve (*Amer. Jour. of the Medical Sciences*, March, 1910) which had been studied clinically by Dr. Spiller five years before and which we together studied pathologically. Section of the roots of the right fifth nerve showed much degeneration when stained by the Weigert method. In this case there was also a right hemiplegia due to recent softening in the temporal lobe. Similar cases have been recorded by Oppenheim, Brasch and by Pick. The last two also found the nerve degenerated and a degeneration of the spinal nerve root. The trouble is usually unilateral, but bilateral involvement has been reported by Leudet and Labarriere and by Hutchinson. The sensory division is much more frequently affected than the motor though cases with distinct palsy of the muscles of mastication have been reported by Ziemsson, Lowenfield and Oppenheim.

It will be noticed that the cases cited above occurred in the later stages of the disease and that the palsy was more or less permanent. As in the case of facial palsy, however, the palsy can occur in the early stage and is then transient but these cases are rare, much more so than the facial and, when they occur, usually affect the sensory division and give rise to neuralgic pains so that these cases are, in effect, cases of trifacial neuralgia. The pathologic change is probably a basal meningitis of moderate severity as is the case in the early facial palsies.

The case that I wish to report is one of fifth nerve palsy occurring in the early stage of syphilis which began with pain in the face; later he developed the anesthesia and palsy characteristic of the degenerative change in the nerve. He improved rapidly under antisiphilitic treatment.

Mr. L. H., age 39 years, was admitted to the University Hospital Jan. 21, 1918, complaining that the right side of his face felt "dead." His family and previous medical history were not important in this connection except that he said that he had been infected with syphilis about four months before. About five weeks before he was admitted to the Hospital he began having a pain in the right cheek which at first was thought to be due to a tooth, but soon afterward the pain spread to the right side of the head and to the nose and eye. An X-ray, he says, showed no trouble in the teeth and as the pain was severe a physician treated his antrum, but was unable to find any pathologic condition there.

He says that shortly after this treatment he developed a numb feeling in the entire right side of the face and the right side of the head and it was that way up to the time of his admission although

the pain had subsided. He had no other complaints.

Examination showed that he was well nourished and he seemed to be mentally normal. There were some enlarged glands in the postcervical region. His pupils were equal but they did not react to light. They reacted well in accommodation. The extraocular movements were normal. There was no facial palsy, he could wrinkle the forehead, close the eyes and draw back both corners of the mouth equally well. He was anesthetic to touch and pinprick in an area corresponding to the distribution of the right fifth nerve. The jaw on opening deviated to the right, but the tongue protruded in the midline of the jaw. The right masseter and temporal muscles could not be felt to contract in the act of biting, though the muscles on the other side contracted strongly. The right cornea was anesthetic. There was no deafness, and no difficulty in speech or deglutition. His tendon reflexes were all normal and there was no sensory loss over the body or extremities.

The ophthalmoscopic examination showed a marked neuroretinitis in the right eye of a rather acute type, the left fundus was somewhat congested, but otherwise normal.

The cerebrospinal fluid showed 79 cells to the cmm. The carboic test was negative. The Nonne-Apelt phase one was positive, phase two negative. Reducing substance was normal. The gold sol and the mastic reaction gave the curve for cerebrospinal syphilis (123321000). The Wassermann reaction on the cerebrospinal fluid was 4 plus. The Wassermann reaction on the blood was also 4 plus.

The patient was placed on treatment January 22 consisting of daily intramuscular injections of mercury succinimide. On January 20 he said that his face was not so numb and the area of anesthesia was found to be diminished in size. On February 4 he was completely reexamined and the area of

anesthesia was found to be still further diminished. The distribution of the third division and the auriculotemporal branch showed no sensory change. The evidence of motor palsy was the same as before.

The patient continued to take treatment until February 9. At this time the anesthesia of the face had almost completely disappeared and the right masseter muscle would contract, although it was weaker than the left.

DISCUSSION.

DR. MAX PEET: This is especially interesting to me naturally because the man first had the symptoms of trifacial neuralgia followed by anesthesia. Some of these cases certainly have pain in the face for many months or many years due to syphilis and come in for operative relief. All of our patients so far that we have operated upon have had negative Wassermanns fortunately, but the possibility must always be considered. It seems to me extremely interesting that we have acute inflammation of the fifth nerve giving the acute pain of trifacial neuralgia followed so rapidly by degenerative changes. I was impressed with the drawing showing such a complete distribution of anesthesia, more than in any of the cases in which we have cut the sensory root. All of those cases have shown diminished sensation over the pinna of the ear but not complete anesthesia, so the man has really a greater anesthesia than we often get by cutting the sensory root.

DR. CAMP: With reference to the sensory distribution of the fifth, it is, of course, a rather variable factor. In cases where the gasserian ganglion has been extirpated, sometimes the ear is completely anesthetic including the pinna, sometimes the area of anesthesia comes through the ear, and sometimes the ear escapes entirely.

Shotgun Nostrums.—As the soldier of to-day uses a rifle instead of a blunderbuss, so the modern physician uses single drugs rather than shotgun mixtures. There are many types of "shotgun" nostrums. Some are dangerous, as in the case of "Bromidia;" some are preposterous therapeutic monstrosities which excite the contempt of educated physicians, as in the case of "Tongaline;" some are merely useless mixtures of well known drugs sold under grotesquely exaggerated claims, as in the case of "Peacock's Bromides." It is impossible to determine from the published formulas just how much hydrated chloral and potassium bromide Bromidia contains, but it is probable that there are about fifteen grains of each of these two drugs to the fluidrachm and variable amounts of Indian cannabis and a small amount of either extract or tincture of hyoscyamus. Bromidia is a distinctly dangerous mixture for indiscriminate use, particularly so if the advertising creates the impression that in it the chloral hydrate has been deprived of its untoward effects. Tongaline is said to consist of tonga, cimicifuga racemosa, sodium salicylate, colchicum and pilocarpin. This jumble of drugs would be merely ludicrous, if anything that degrades therapeutics could be considered so lightly. Peacock's

Bromides is said to consist of the bromides of sodium, potassium, ammonium, calcium and lithium. The exploiters claim superiority over extemporaneously prepared mixtures because of the absence of contaminating chlorids said to be present in commercial bromids. The truth is that the chlorids are used as antidotes in bromid poisoning. Bromidia, Tongaline and Peacock's Bromides have been the subject of reports of the Council on Pharmacy and Chemistry (*Jour. A.M.A.*, March 2, 1918, p. 642).

Barbital (Veronal) Classed as a Poison by England.—Because of frequent reports of accidents and habit formation, the Privy Council of Great Britain has classified as poisons "diethylbarbituric acid, and other alkyl, aryl, or metallic derivatives of barbituric acid, whether described as veronal, proponal, medinal, or by any other trade name, mark or designation; and all poisonous urethanes and ureides." As a result veronal will seldom be dispensed except on a physician's order, and that a record of such sales will be kept in the pharmacist's poison book. (The official name for diethyl-barbituric acid of the British Pharmacopoeia is barbitone in the United States the official designation for this product is barbital). (*Jour. A.M.A.*, March 30, 1918, p. 953).

MEMBERS

OF THE

COUNCIL

MICHIGAN STATE

MEDICAL

SOCIETY

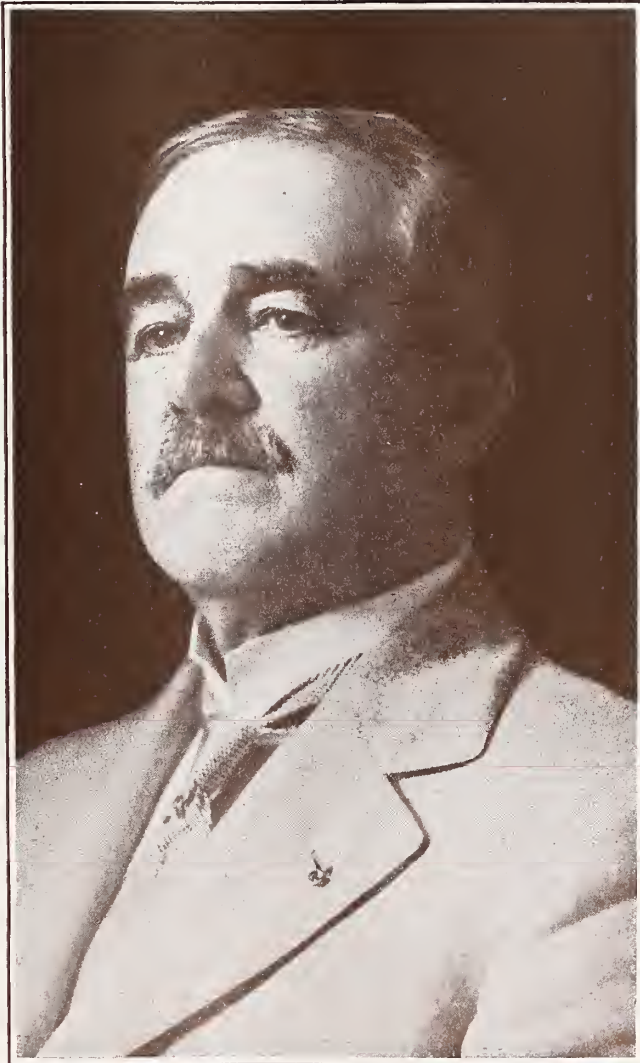
1917-1918



WM. T. DODGE, M. D.
CHAIRMAN OF THE COUNCIL
COUNCILOR ELEVENTH DISTRICT
BIG RAPIDS



GUY L. KEIFER, M. D.
COUNCILOR FIRST DISTRICT
DETROIT



A. E. BULSON, M. D.
COUNCILOR SECOND DISTRICT
JACKSON



S. K. CHURCH, M. D.
COUNCILOR THIRD DISTRICT
MARSHALL



A. H. ROCKWELL, M. D.
COUNCILOR FOURTH DISTRICT
KALAMAZOO



W. J. DUBOIS, M. D.
COUNCILOR FIFTH DISTRICT
GRAND RAPIDS



A. M. HUME, M. D.
COUNCILOR SIXTH DISTRICT
OWOSSO



W. J. KAY, M. D.
COUNCILOR SEVENTH DISTRICT
LAPEER



A. L. SEELEY, M. D.
COUNCILOR EIGHTH DISTRICT
MAYVILLE



B. H. MCMULLEN, M. D.
COUNCILOR NINTH DISTRICT
CADILLAC

DECEASED
APRIL FIRST, 1918



C. H. BAKER, M. D.
COUNCILOR TENTH DISTRICT
BAY CITY



R. S. BUCKLAND, M. D.
COUNCILOR TWELFTH DISTRICT
BARAGA



F. C. WITTER, M. D.
COUNCILOR THIRTEENTH DISTRICT
PETOSKEY



C. T. SOUTHWORTH, M. D.
COUNCILOR FOURTEENTH DISTRICT
MONROE



D. EMMETT WELSH, M. D.
TREASURER
GRAND RAPIDS

Official Program of the 53d Annual Meeting of the Michigan State Medical Society at Battle Creek May 7-8-9, 1918

Meeting Place, Masonic Temple. Headquarters, The Tavern

IMPORTANT

1. When you register secure a **Credential Card**.
2. **Special Tickets are required for Camp Custer Clinics and the Patriotic Meeting.**
3. **Special Tickets will be given out ONLY ON WEDNESDAY** at the Registration Booth. From 8:00 a. m. to 7:30 p. m.
4. **NO ADMISSION to Clinics or Theatre without a Special Ticket.**
5. **POSITIVELY NO CAMERAS** will be permitted at Camp Custer. Do not carry one with you.

THE COUNCIL.

Chairman—William T. Dodge, Big Rapids.
Secretary—Frederick C. Warnshuis, Grand Rapids.

MEETING.

Tuesday, May 7, 5:30 P. M.—The Tavern.
Wednesday, May 8, 12:00 M.—Masonic Temple
Thursday, May 9, 12:00 M.—Camp Custer.

HOUSE OF DELEGATES.

President—Andrew P. Biddle, Detroit.
Secretary—Frederick C. Warnshuis, Grand Rapids.

FIRST SESSION.

Tuesday, May 7th. The Bridge—The Tavern.
Time: 7:45 P. M. Sharp.

ORDER OF BUSINESS:

1. Call to order.
2. Roll call.
3. Reading minutes of last meeting.
4. Report of the Council.
W. T. Dodge, Chairman.
5. Report of Committee on Legislation and Public Policy. A. M. Hume, Owosso.
6. Report of Committee on Medical Education.
A. M. Barrett, Ann Arbor.
7. Report of Delegates to American Medical Association. Guy L. Connor, Detroit.
8. Report of Committee on Venereal Prophylaxis.
H. W. Plaggemeyer, Detroit.
9. Report of Committee on Tuberculosis.
A. F. Fischer, Hancock.
10. Report of Committee on Public Health Legislation. John L. Burkhardt, Big Rapids.

11. Report of Committee on Civic and Industrial Relations.
Reuben Peterson, Ann Arbor.

12. Election of Committee on Nominations. The duty of this Committee is to nominate:
 - (a). First, Second, Third and Fourth Vice-Presidents.
 - (b). Three Delegates and Alternate Delegates to American Medical Ass'n.
 - (c). Councillors for:

2d District—A. E. Bulson—Term expires.

4th District—A. H. Rockwell—Term expires.

5th District—W. J. DuBois—Term expires.

7th District—W. J. Kay—Term expires.

8th District—A. L. Seeley—Term expires.

9th District—B. H. McMullen—Term expires.

10th District—C. H. Baker—Term expires.

12th District—R. S. Buckland—Term expires.

14th District—C. T. Southworth—Term expires.

- (d). To select place for 1919 Annual Meeting.

(No two members on the nominating committee shall be from the same Councilor District.)

13. Appointment of Business Committee.
By the President.
14. New Business.

SECOND SESSION.

Masonic Temple, Wednesday Morning, May 8th,
8:00 A. M. Sharp.

1. Roll call.
2. Reading minutes.
3. Report of Committees.
 - (a). Business.
 - (b). Appointed Committees.
 - (c). Committee on Nominations.
4. Election of Nominees.
5. Unfinished Business.
6. Miscellaneous Business.
7. Adjournment *Sine Die*.

HOUSE OF DELEGATES.**Delegates and Alternates.**

NOTE—The black-face type that of the Delegate; the light-face type that of the Alternate.

ALPENA—Branch No. 48

E. E. McKnight, Alpena.
J. D. Dunlop, Alpena.

ANTRIM-CHARLEVOIX-EMMET—

Branch No. 41

BARRY—Branch No. 26**BAY-ARENAC—IOSCO—Branch No. 4**

W. G. Kelly and J. C. Grosjean, both Bay City.
J. McLurg and C. H. Baker, both Bay City.

BENZIE—Branch No. 59**BERRIEN—Branch No. 50**

R. M. Dunnington, Hartford
H. C. Hill, Benton Harbor

BRANCH—Branch No. 9

W. S. Shipp, Battle Creek, and G. B. Gesner,
D. H. Wood, Coldwater.

CALHOUN—Branch No. 1

W. L. Godfrey, Battle Creek, and E. L. Parmeter,
Albion.

W. H. Baldwin, Coldwater.
Marshall.

CASS—Branch No. 36

W. C. McCutcheon, Cassopolis
E. W. Tonkin, Edwardsburg

CHEBOYGAN—Branch No. 58**CHIPPEWA-LUCE-MACKINAW—Branch
No. 35****CLINTON—Branch No. 39**

J. E. Taylor, Ovid.
H. D. Squair, St. Johns.

DELTA—Branch No. 38

W. B. Boyce, Escanaba
Geo. Bjorkman, Gladstone

DICKINSON-IRON—Branch No. 56

J. A. Crowell, Iron Mountain
H. A. Newkirk, Iron Mountain

EATON—Branch No. 10

F. J. Knight, Charlotte.
J. D. McEachran, Vermontville.

GENESEE—Branch No. 24

J. C. Benson, Flint.
C. H. O'Neil, Flint.

GOGEBIC—Branch No. 52

L. O. Houghten, Ironwood.
W. E. Tew, Bessimer.

**GRAND-TRAVERSE-LEELANAU—Branch
No. 18**

G. M. Johnson, Traverse City.

GRATIOT-ISABELLA-CLARE—Branch No. 25

S. E. Gardiner, Mt. Pleasant.
C. T. Pankhurst, North Star.

HILLSDALE—Branch No. 3**HOUGHTON-BARAGA-KEWEENAW—
Branch No. 7**

W. H. Dodge, Hancock.
J. E. Scallon, Hancock.

HURON—Branch No. 47

S. B. Young, Caseville.

INGHAM—Branch No. 40

Freeman A. Jones, Lansing.
O. H. Freeland, Mason.

IONIA—Branch No. 16**JACKSON—Branch No. 27**

G. A. Seybold, Jackson.
M. S. Vaughan, Jackson.

**KALAMAZOO-VAN BUREN-ALLEGAN—
Branch No. 64****KENT—Branch No. 49**

J. D. Brook, Grandville.
C. C. Slemons, Grand Rapids.
H. J. Pyle, Grand Rapids.
W. H. Veenboer, Grand Rapids.
C. W. Brayman, Cedar Springs.
A. Nyland, Grand Rapids.

LAPEER—Branch No. 23

Dr. Chester, Emmett.
Peter Stewart, Hadley

LENAWEE—Branch No. 51**LIVINGSTON—Branch No. 6****MACOMB—Branch No. 48****MANISTEE—Branch No. 19**

James King, Manistee
L. S. Ramsdell, Manistee

MARQUETTE-ALGER—Branch No. 28

A. W. Hornbogen, Marquette.
R. A. Burke, Diorite.

MASON—Branch No. 17

MECOSTA—Branch No. 8

J. B. Campbell, Stanwood.
B. F. Franklin, Millbrook.

MENOMINEE—Branch No. 55**MIDLAND—Branch No. 43****MONROE—Branch No. 15**

V. Sisung, Monroe.
W. F. Acker, Monroe.

MONTCALM—Branch No. 13**MUSKEGON—Branch No. 61**

F. B. Marshall, Muskegon.
J. M. J. Hotvedt, Muskegon.

NEWAYGO—Branch No. 50**OAKLAND—Branch No. 3****OCEANA—Branch No. 67****O. M. C. O. R. O.—Branch No. 11****ONTONAGON—Branch No. 66****OSCEOLA-LAKE—Branch No. 30****OTTAWA—Branch No. 32**

R. H. Nichols, Holland
J. DePree, Zeeland.

PRESQUE ISLE—Branch No. 63**SAGINAW—Branch No. 14**

T. M. Williamson, Saginaw.
M. D. Ryan, Saginaw.

SANILAC—Branch No. 20

J. F. Waltz, Brown City.
W. G. Campbell, Brown City.

SCHOOLCRAFT—Branch No. 57

D. W. Ross, Manistique.
E. R. Wescott, Manistique.

SHIAWASSEE—Branch No. 33

W. E. Ward, Owosso.

ST. CLAIR—Branch No. 45**ST. JOSEPH—Branch No. 29****TRI COUNTY—Branch No. 62**

O. D. Miller, Cadillac
S. C. Moore, Cadillac

TUSCOLA—Branch No. 44**WASHTENAW—Branch No. 42**

Mack Marshall, Ann Arbor
J. A. Wessinger, Ann Arbor

WAYNE—Branch No. 2

R. C. Andries, Detroit.
James A. MacMillan, Detroit.
Frank A. Starkey, Detroit.
James E. Davis, Detroit.
A. W. Ives, Detroit
George C. Chene, Detroit.
Joseph H. Andries, Detroit.
Harry Pepper, Detroit.
R. C. Clark, Detroit.
R. C. Jamieson, Detroit.
R. E. Loucks, Detroit.
Harold Wilson, Detroit.
Walter J. Wilson, Jr., Detroit.
James Cleland, Jr., Detroit.
Leonard F. C. Wendt, Detroit.
Charles D. Aaron, Detroit.
C. E. Simpson, Detroit.
Frank B. MacMullen, Detroit.
G. W. Wagner, Detroit.
J. W. Cunningham, Detroit.
C. H. Stiles, Detroit.
C. D. Brooks, Detroit.
John T. Watkins, Detroit.
D. M. Campbell, Detroit.
W. A. Defnet, Detroit.
Wm. C. Lawrence, Detroit.
Harry E. Dibble, Detroit.
David Inglis, Detroit.
Rollin H. Stevens, Detroit.
Worth Ross, Detroit.
H. Wellington Yates, Detroit.
Guy Connor, Detroit.

GENERAL MEETING

Masonic Temple Auditorium, Wednesday, May
8th at 9:45 A. M.

President—Andrew P. Biddle, Detroit.

Secretary—Fred'k C. Warnshuis, Grand Rapids.

1. Call to Order.
2. Invocation.

F. H. Clapp, Pastor

First Methodist Church, Battle Creek.

3. Address of Welcome.

Mr. W. J. Smith, Battle Creek.

4. Address of Welcome.
Charles E. Stewart, Battle Creek,
President Calhoun County Medical Society.
5. Response.
President, Andrew P. Biddle, Detroit.
6. Report of House of Delegates and Announcements.
The Secretary.
7. President's Annual Address. "The Duty of the Hour is Service."
8. "The Principles Underlying the Treatment of Infected Wounds."
Major Joseph Colt Bloodgood, Baltimore, Md.
Discussion—Dr. W. T. Dodge, Big Rapids.
9. Miscellaneous Business.
10. Nominations for President 1918-19.
11. Adjournment.

SECOND SESSION.

Camp Custer, Mess Tent, 12 M.

1. Report of House of Delegates.
The Secretary.
2. Announcement of Ballot for President.
3. Introduction of President 1918-19.
4. Resolutions.
5. Adjournment *Sine Die*.

PATRIOTIC MEETING

Opera House, Wednesday Evening, May 8th,
7:30 P. M.

ADMISSION BY RESERVED TICKETS ONLY

1. The Star Spangled Banner.
Audience and Band.
2. Convocational.
President Andrew P. Biddle.
3. "The National Cantonment."
General Kennedy, Commander Camp Custer
4. "Camp Custer."
Lt.-Col. C. J. Bartlett,
Division Surgeon, Camp Custer.
5. "What Are We Fighting For?"
Rev. Alfred W. Wishart, Grand Rapids.
6. "Experiences with Medical Officers in France and Italy." (Lantern slides).
James W. Inches, M.D., Detroit.
7. "Reconstruction of Wounded Soldiers." (Moving pictures).
Representative of Surgeon General.
8. Adjournment.

SECTION MEETINGS.

General Note: All the Sections will meet in the Masonic Temple. Meetings convene at 1:30 p. m. Section meetings will be held only on **Wednesday Afternoon.**

SECTION PROGRAMS.

SECTION ON GENERAL MEDICINE.

Wednesday Afternoon, May 8, 1918, at 1:45 P. M.

Chairman—Walter J. Wilson, Jr. Detroit.
Secretary—W. H. Enders, Jackson.

1. Chairman's Address.
Diseases of the Aorta. (Illustrated by lantern slides).
Dr. Walter J. Wilson, Detroit.
 - a. Aortic Stenosis.
 - b. Aortic Regurgitation, Specific and Non-Specific
 - c. Aortitis, Specific and Non-specific.
 - d. Aortic Aneurysm.
2. Election of Section Officers: Chairman for one year, Secretary for two years.
3. The Clinical Application of Electrocardiography.
Dr. George E. Fahr, Ann Arbor.
4. Treatment of Nephritis.
Dr. Jas. H. Dempster, Detroit.
 - a. The Importance of Diet—low protein.
 - b. Uselessness of Diuretic Drugs.
 - c. Treatment of Acidosis.
5. Early Diagnosis of Tuberculosis.
Dr. J. L. Chester, Emmett.
6. Diagnosis and Complications of Typhoid Fever.
Dr. E. W. Haass, Detroit.
 - a. Diagnosis and complications of typhoid fever.
 - b. The Clinic.
 - c. Value of laboratory aid, especially Widal reaction, blood counts and cultures.
 - d. In differential diagnosis most difficulty is encountered from colon infections, acute military tuberculosis, malignant endocarditis and meningitis, and rarely from genuine influenza.
 - e. The differentiation of typhoid from the paratyphoid groups is of value from the standpoint of prognosis.
 - f. Most important complications are those of perforation hemorrhage and gall-bladder infection.
7. Organization of a City Health Department.
Dr. C. G. Parnall, Jackson.
8. Pathology of the Common Diseases of the Cord. (Lantern demonstration).
Dr. Frank R. Starkey, Detroit.
9. Lipodystrophia Progressiva.
Dr. Blanch N. Epler, Kalamazoo.
 - a. Rarity.
 - b. Pathology.
 - c. Clinical Consideration.
 - d. Differentiation.
 - e. Etiology.
 - f. Prognosis.
 - g. Treatment.
10. Fragilitas Ossium, with Report of Three Cases.
Dr. Frank L. Rose, Jackson.
 - a. A rare disease. Synonyms.
 - b. Distinguished from rickets osteo-malacia and osteogenesis imperfecta.
 - c. Paucity of literature.
 - d. Report of 3 cases in one family. Other cases in collateral branches of same family.
 - e. It's pathology and etiology not well established. Suggestion of thymus gland as a possible etiologic factor.

SECTION ON SURGERY**Monday, May 8, 1918, at 1:45 P. M.**

Chairman—A. W. Blain, Detroit.

Secretary—J. C. Andries, Detroit.

1. Chairman's Address—Group Medicine.

Alexander W. Blain, M.D., F. A. C. S., Detroit.

2. Election of Officers: Chairman for one year,
Secretary for two years.

3. Surgery of the Stomach.

William J. Cassidy, M.D., F. A. C. S., Detroit.

4. Surgical Diseases of the Knee Joint.

Raymond C. Andries, M.D., F.A.C.S., Detroit.

5. Surgical Technic of Goiter Operations.

Max Ballin, M.D., F.A.C.S., Detroit.

6. The Acute Abdomen.

F. Gregory Connell, M.D., F.A.C.S., Oshkosh

7. Extravasation of Urine.

William E. Keane, M.D., F.A.C.S., Detroit.

8. Case Reports.

1. Primary Carcinoma of Kidney.

2. Total destruction of the Kidney with
Sinus Formation, continuous from the
Ureter to the Epidermis.

James E. Davis, M.D., F.A.C.S., Detroit.

9. Announce subject later.

Willet J. Herrington, M.D., F.A.C.S., Bad Axe.

SECTION ON GYNECOLOGY.**Wednesday Afternoon, May 8, 1918, at 1:45 P. M.**

Chairman—H. W. Hewitt, Detroit.

Secretary—H. J. Vandenberg, Grand Rapids.

1. Election of Officers: Chairman for one year,
Secretary for two years.

2. My Experience in Cesarean Section.

J. Clarence Webster, M.D., F.A.C.S.,
Chicago, Ill.Discussion—W. P. Manton, M.D., F.A.C.S.,
Detroit, Mich

3. The Improper Treatment of Abortion.

James E. Davis, M.D., Detroit.

Discussion—Major Reuben Peterson, Ann Arbor

4. The Test of Labor.

George Kamperman, M.D., F.A.C.S., Detroit.

5. The Surgical Treatment of Procidentia Uteri.
Lantern slide demonstration.

Hugh Hagerty, M.D., F.A.C.S., Detroit.

6. Radiotherapy and Gynecology.

G. E. Pfahler, M.D., F.A.C.S., Philadelphia,

Discussion—Henry Hulst, M. D., Grand Rapids.

**SECTION ON OPHTHALMOLOGY AND
OTO-LARYNGOLOGY.****Wednesday Afternoon, May 8, 1918, at 1:45 P. M.**

Chairman—Geo. E. Frothingham, Detroit.

Secretary—Ferris N. Smith, Grand Rapids.

1. Election of Officers: Chairman for one year,
Secretary for two years.2. Fractures of the Skull Involving the Ear and
Accessory Sinuses—with slides.

Dr. Wm. Cassidy, Detroit.

3. Diseases of the Accessory Nasal Sinuses with
Original Slide Demonstrations.

Dr. J. W. Murphy, Cincinnati, Ohio

4. Eye Paper. (Subject to be announced).

Major Harry S. Gradle, M. R. C.

5. War Surgery of the Head, Neck and Chest with
slides.

Dr. H. M. Richter, Chicago, Ill.

Thursday, May 9, 1918.**A DAY AT CAMP CUSTER.****U. S. Army Cantonment.**

Lt. Col. C. J. Bartlett—Division Surgeon.

Lt. Col. Lewis Wine Bremerman—Commander
310th Sanitary Train.(Lt. Col. Bremerman has been detailed by Lt.
Col. Bartlett to act as Director for the day).**I.****8:15 a. m.**By automobile from Battle Creek to Regi-
mental Infirmaries. Eight miles ride giving birds-
eye view of entire Camp. Automobile fare, 25
cents.**II.****8:45 a. m.—Sick Call.**By special arrangement the regular morning
Sick Call will be delayed till 8:45 a. m. Demon-
stration will be given of method of examining
and disposing of those who answer Sick Call.Sick Call will be held in several Barracks. A
ticket will be required. Barrack numbers will be
announced at the General Session.**III.****10:15 a. m.—Clinical Demonstrations.**

1. Medical Clinic.

2. Surgical Clinic.

3. Eye, ear, nose and throat Clinic.

4. Genito-Urinary Clinic.

Medical Officers in command of these services
will conduct a Clinic and Demonstration together
with brief talks by various detailed officers, and
the exhibition of cases.**Important.** Inasmuch as a single clinic will
accommodate only a certain number the attend-
ance at these clinics will be limited and appor-
tioned. **No one will be admitted to any clinic
who does not hold a ticket.** Tickets to be secured
at Registration Booth in Masonic Temple. Be
sure and secure your ticket when you register.**IV.****12:15—Mess Call.**

A splendid chance to sample Camp rations.

V.

1:30 p. m.—Division Review.

The Commanding General, as a special favor to the Society, will hold a Division Review. The full Camp force of some 30,000 men will draw up for formal inspection and review. The review will occupy some two hours and will be a wonderful inspiring Military Maneuver.

VI.

3:30 p. m.—Sanitary Corp Exhibiton.

Under Direction of Major Lewis Wine Bremerman the Ambulance Companies and Field Hospital Companies will give a field demonstration. This will consist of:

1. Setting Field Hospital.
2. Evacuation of Hospital.
3. Stretcher Bearers Bringing in Wounded.
4. Receiving of Wounded.
5. Disposal of Wounded.
6. Military Drills.
7. Transportation.
8. First Aid.
9. Keeping Records.
10. Striking a Field Hospital.

COMMITTEES.**Calhoun County Society Committees.****General Arrangements.**

Dr. B. N. Colver, Chairman.
 Dr. A. F. Kingsley (Chairman on Publicity).
 Dr. R. C. Stone (Chairman Hotel Arrangements).
 Dr. H. R. Allen (Chairman of Com. on Exhibits).
 Dr. E. L. Eggleston (Chairman on Reception).
 Dr. R. D. Sleight (Chairman on Entertainment).
 Dr. C. S. Gorsline (Chairman of Finance Com.).

Hotel Accommodations.

Dr. R. C. Stone (Chairman), Dr. W. S. Shipp,
 Dr. J. A. Elliott, Dr. R. D. Sleight.

Publicity.

Dr. A. F. Kingsley (Chairman), Dr. J. G. Gage,
 Dr. L. E. Stegman.

Exhibits.

Dr. H. R. Allen (Chairman), Dr. A. F. Kingsley.

Finance.

Dr. C. S. Gorsline (Chairman), Dr. R. D. Sleight, Dr. R. V. Gallagher.

Entertainment.

Dr. R. D. Sleight (Chairman), Dr. J. A. Elliott,
 Dr. A. S. Kimball, Dr. R. C. Stone. Dr. S. K. Church.

Reception.

Dr. E. L. Eggleston (Chairman), Dr. J. G. Gage, Dr. J. W. Gething, Dr. W. L. Godfrey,
 Dr. J. S. Pritchard, Dr. Estella Norman.

GARAGES.

Post Tavern Garage will arrange to store 40 cars; storage, 75 cents per night; washing \$1.50 to \$2.00.

Phillips Garage will arrange to store 25 or more cars; storage, 50 cents per night, washing, \$1.00 to \$2.00.

Independent Garage will arrange to store 50 cars; storage, 75 cents per night; washing, \$1.50 to \$2.50.

American Motor Co. will arrange to store 10 cars; storage, 75 cents per night; washing, \$1.50.

**THE BULGARIAN BACILLUS AS A
 REMEDIAL AGENT.**

A simple and effective remedy for the summer diarrheas and other common ailments of the intestinal canal is the Bulgarian bacillus. This was popularized a few years ago by the late Professor Metchnikoff, who pointed out that this organism, in the form of buttermilk, is extensively used by the Bulgarians, who have the reputation of being the longest lived people in Europe. While this lactic acid organism is not, of course, a panacea for senility, it is a remedy of very great value for many intestinal affections. Clock and others have shown that by its use summer diarrheas of children can be controlled more quickly, and with less disturbance of the child's regular food than with any other remedy. It has also been recommended for intestinal indigestion, autotoxemia of intestinal origin, and even for such serious diseases as diabetes.

It is important to use a culture of the Bulgarian

bacillus which you can depend upon. Galactenzyme (Abbott) is such a culture. This product is made from the type A organisms, of established virility, under the most careful, aseptic precautions. It is available both in tablet form and in bouillon. For ordinary use the tablets are generally preferred. We recommend a careful trial of Galactenzyme in cases of summer diarrhea. Now is the time to procure a supply.

Compatibility of Phenolphthalein.—It is better not to combine several laxatives, but those who believe in doing this may combine phenolphthalein with drugs that can properly be prescribed in powders or pills as, for instance, calomel. Since phenolphthalein and calomel are both tasteless, they may be prescribed in powders or enclosed dry in capsule, cachet or wafer, the amount of each ingredient being estimated according to the susceptibility of each patient. (*Jour. A.M.A.*, March 30, 1918, p. 950).

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Arthur M. Hume, Chairman.....Owosso
 Guy L. Kiefer.....Detroit
 W. J. Kay.....Lapeer
 W. J. DuBois.....Grand Rapids

EDITOR

FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
 Grand Rapids, Mich.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

May

Editorials

EUGENICS AND PUBLIC HEALTH.

It has long been known that a considerable share of disease is due to the direct inheritance or transmission of a specific disease and especially to inherited weaknesses or tendencies that predispose to disease or subnormal development. The chief among such conditions are venereal diseases, tuberculosis, dyscrasias of metabolism and the blood, and nervous and mental disorders.

Perhaps it is more because of the sociological effect of such inheritance rather than because of deaths and illness produced by it, that so much agitation arises and so many different proposals are made for the limiting and control of racial reproduction. In fact, the greatest part of the sentiment on this subject is directed against the reproduction of moral and mental degenerates who comprise the bulk of the dependent class. Instances have frequently been quoted of where a single criminal family has in the course of a few generations produced thousands of weak-minded, insane and criminal descendants at the cost of great sums of money to the commonwealth. While we do not in-

dorse the radical view that all crime is evidence of mental disease, it can not, on the other hand, be disputed that whenever there is a retardation in mental development the abstract conceptions of social relations and individual responsibility will be less clearly comprehended and the faculty of reflection by which the remote consequences of an act are considered will be poorly exercised.

In the past, the majority of the measures proposed for improving the racial types have been largely of a negative order, consisting not so much in encouraging the union of better types and improving the opportunities for such marriages and increasing the number of offspring of such individuals but rather by legislation aimed at eliminating the deficient types. Perhaps the most effective of these means is the segregation of the unfit. Lately a law enacted in the State providing for unsexing operations to be performed on inmates of State institutions has been declared unconstitutional. In Wisconsin a law was passed sometime ago requiring that every applicant for a marriage license should submit a certificate of a negative blood Wassermann. The sole effect of this law was to decrease the number of marriages, the license being obtainable in other states. We dare say that even were such a law to become a Federal statute it would fail to attain its object but merely produce an increase in the number of illegitimate births.

It is hardly worth while for us to mention in this connection the efforts on the part of a few sentimentalists to prevent the rearing of improperly large families among the indigent by spreading information on methods of birth control. It has been well demonstrated the burdensome, large families of this class are not due so much to ignorance of the vicious practices which these propagandists recommend as they are to the utter lack of responsibility and self restraint in the poverty stricken people.

A little reflection will show that the problem of improving the quality of the race can not be solved by resorting to the artificial methods of selection but by giving the great, irresistible human instincts a full, wholesome play. In no

other classes do the arbitrary standards of selection in marriage hold more sway than among the very rich and the nobility of Europe. Marriages in these classes are almost universally dependent on distinctions of wealth and social position rather than natural temperamental attractions. The evil effects in the character of their progeny are too well known to review here. William Hohenzollern is sufficient example of a type that we do not want.

Natural, sexual selection when not too much hampered, has a powerful tendency upward. Few women, if given the opportunity will prefer to marry a criminal or one mentally incompetent rather than a robust, normal individual who is more certain to provide her the support and companionship she desires, and while it may be said that one feeble-minded person may marry another, it can easily be seen that the off-spring of such a union would be so markedly inferior that the strain could not be long perpetuated.

We must agree, then, that natural selection, if fully operative will tend to bring about an upward evolution of the race. Among the lower animals, Darwin considers it a very conspicuous force in the evolution of species. It follows that any inquiry into the conditions that produce racial deterioration must involve an examination of the factors that prevent natural sexual selection from operating. This brings us to the point of our article. We hold that the problem is an economic one. So long as it is possible for a highly conservative body such as the Industrial Commission appointed by Congress to report that 60 per cent. of the people in this country are living on an income insufficient to provide them with the ordinary necessities of life, such as food, clothing, and proper shelter, just so long will it be possible for mentally weak to marry normal, healthy women and vice versa.

It is easy to follow the relation between infant mortality and poverty. Take for instance the following statistics from the U. S. life tables of 1910:

VITAL STATISTICS.

As to the subject of eugenics the following statistics taken from the U. S. life table have

some bearing: The death rate per 100,000 during the first year of life in the registration states is 124.95. This is by far the highest rate below the age of 79 when it again reaches 124.99. The first year of life, therefor the most hazardous as the deaths occurring past the age of 79 are more often due to the gradual wearing out of one part or another which may produce death in itself or greatly predispose to some other intervening cause.

If we compare the death rate during the first year of life of the white children living in the cities with those living in the country, we find a very remarkable difference, an average of 122.51 for cities of more than 10,000 population and an average of 94.01 for the rural districts. Any one acquainted with conditions in large cities will agree that the difference would be much more marked if the census for cities had been confined to those of 75,000 or more. Nor can we persuade ourselves that conditions of country life are anywhere near to ideal. Country people on the whole are no better informed about raising children than are city people.

In every locality by far the greatest percentage of deaths in young infants occur during the first month, there being from three to five times as many deaths in this month than in any other like period of life. More than one-half of the deaths during the first year occur during the first three months.

Concerning the statistics of other periods of life it is interesting to note that there is a gradual falling off in the death rate up to the age of 12 or 13 for females and 14 to 15 for males, when it begins to rise again and steadily increases.

We hope by this that we have demonstrated that the question of eugenics is not a medical one and that the breeding of human beings on the same standards that cattle are bred is entirely unnecessary and abhorrent. Although putting the burden on the economists does not make it any the easier, it at least absolves us from the responsibility of deducting a solution.

MICHIGAN STATE MEDICAL SOCIETY. PROGRAM.

TUESDAY, MAY 7TH.

5:30 P. M. Council Meeting.
7:30 P. M. House of Delegates—Post Tavern, the Bridge.

WEDNESDAY, MAY 8TH.

8:00 A. M. House of Delegates—Masonic Temple.
9:30 A. M. General Session—Masonic Temple.
1:30 P. M. Section Meetings—Masonic Temple.
7:00 P. M. Band Concert, Camp Custer Band—THEATRE.
8:00 P. M. PATRIOTIC MEETING—THEATRE.

THURSDAY, MAY 9TH—CAMP CUSTER.

8:45 A. M. SICK CALL.
10:00 A. M. SPECIAL CLINICS.
12:00 M. MESS
1:30 P. M. GENERAL REVIEW.
3:00 P. M. FIELD DEMONSTRATION.
5:30 P. M. REVEILLE.

REGISTRATION.

Members and guests are invited to register and receive:

1. Official Program.
2. Official Badge.
3. Certificate of Registration.

SPECIAL TICKETS.

Special tickets to *CAMP CUSTER CLINICS* and to the *PATRIOTIC MEETING* in the theatre will be distributed at the Registration Booth on *Wednesday from 8:00 A. M. to 8:00 P. M.*

Special tickets will only be distributed on presentation of *Certificate of Registration*.

Only one ticket to Camp Custer Clinics will be given to each applicant for but one Clinic. Select the Clinic you wish to attend *MEDICAL, SURGICAL, GENITO-URINARY, EYE, EAR AND THROAT* and request a ticket for only one of these Clinics.

PATRIOTIC MEETING—THEATRE.

WEDNESDAY EVENING—7:00 P. M.

7-8 P. M. Band Concert—Camp Custer Band of 100 Pieces.

8:00 P. M. Official Program.

Reserved seat tickets, no more than four to each member will be distributed on presentation of Certificate of Registration on Wednesday from 8:00 A. M. to 8:00 P. M.

BY ORDER OF THE COUNCIL.

INVITED GUESTS.

The following invited guests will participate in our 53d annual program:

General C. W. Kennedy, Commander, Camp Custer.

Lt. Col. C. J. Bartlett, Division Surgeon, Camp Custer.

Lt. Col. W. S. Bremerman, Commander Sanitary Trains, Camp Custer.

Rev. Alfred W. Wishart, Grand Rapids.

Dr. F. Gregory Connel, Okosh, Wis.

Dr. J. Clarence Webster, Chicago.

Dr. G. E. Pfahler, Philadelphia.

Dr. J. W. Murphy, Cincinnati, O.

Dr. H. S. Gradle, Chicago.

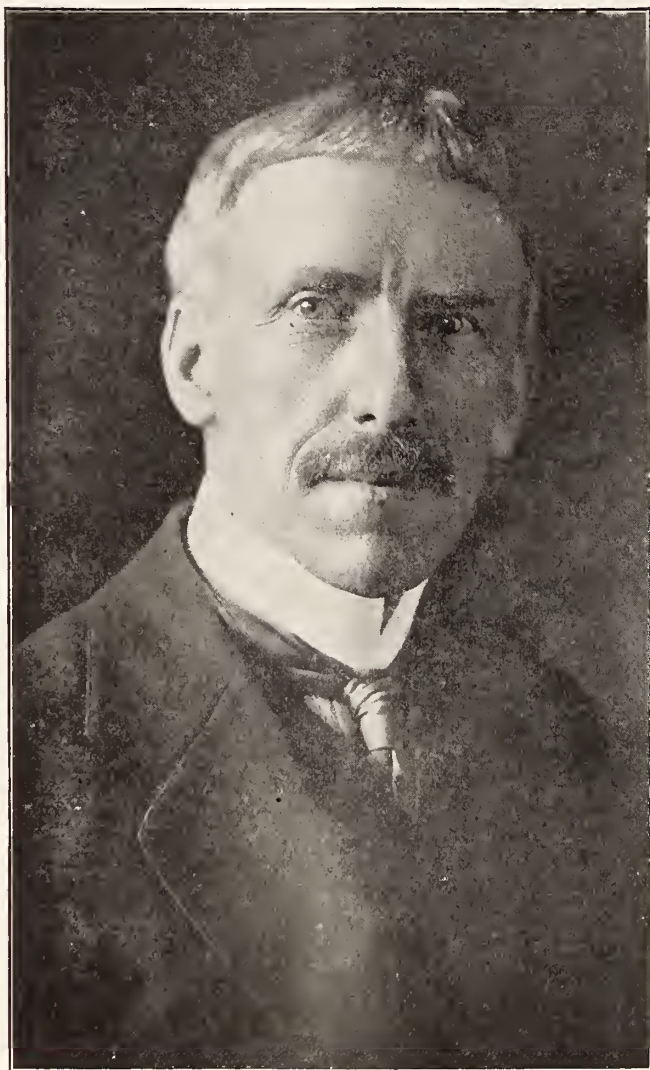
Dr. H. M. Richter, Chicago.

Dr. J. C. Bloodgood, Baltimore. Md.

PRESIDENT BIDDLE.

When Andrew P. Biddle, of Detroit, was elected President of our Society at the Houghton meeting we enumerated in detail the prominent events of his life, the several offices that he held in medical organizations and his civic activities in his home city. Now, at the close of his administration as President of our Society the privilege and pleasure is again ours to extend to him our heartfelt appreciation for the work he has so zealously performed in the interest of the organization and its individual members during his term as President.

We know not what the future holds in store. It is not ours to prophesy the direction and scope of the activities that will engage our organizational effort. We do not know to what degree



ANDREW P. BIDDLE, M. D.
PRESIDENT

[MICHIGAN STATE MEDICAL SOCIETY
1916 - 1917 - 1918
DETROIT

our society may rise in the solving of the sociological problems that will confront our profession when peace among nations is once again declared. We are at the dawn of a new era with hope and eager anticipation mingled with gloomy forebodings as to what will be demanded of each of us and our Society by future events.

The historian of medical life and activity in Michigan who in future years reviews our organizational career will be arrested in his comments by the activity, devotion to organizational work, judicious decisions and capable direction that has ever been exercised and exhibited by Andrew P. Biddle of Detroit during his membership and while serving as Secretary, Editor, Councillor and President. To him will be rightly ascribed a large amount of credit for what we are as a Society today. To Doctor Biddle do we owe a deep and lasting obligation.

Each and every member wishes him every happiness and success and we are sincere in the hope that we may continue to be guided and inspired by his presence and activity for many years to come.

THE COUNCIL.

The term of office of the majority of our Councilors expires with the convening of our 53d annual meeting. Whether all or only part of those whose term of office expires will be re-elected depends upon the action of the House of Delegates.

The members of our present Council represent the men who have guided our society and watched over its interests for the past ten years. A majority of them have served in that capacity since our re-organization in 1902—sixteen years ago.

What we are as a society today, the influence we have exercised, the organizational work that has been accomplished in Michigan is in a very large measure resultant from the faithful performance of duty by our Councilors. They have indeed been deeply solicitous of our Society's welfare and have been conscientious stewards of the trust that was imposed in them.

In view of the faithful services that have

been rendered by these members of our Council we believe it but meet and fitting that permanent record be entered in our official publication, *The Journal*, of this faithful acquittal of the duties delegated to them and the trust that has been imposed. To that end we have caused to be inserted in this issue their photographs as our tribute and method of recording our appreciation of the services they have contributed.

Editorial Comments

Brossy in reviewing 642 cases of hernia found that in one group of 236 cases there were seventeen recurrences or 6.44 per cent of the cases of inguinal hernia. Sometime ago we discussed the subject editorially and emphasized the fact that a definite percent of recurrence would be encountered in any given group of cases no matter how perfect the surgical technic may be.

Fowler in discussing the value of antiseptic agents draws the following conclusions:

(1) Abundant clinical evidence of the efficacy of iodine in skin sterilization has been corroborated by laboratory findings. (2) The germicidal action of mercuric chloride is too slow to be of value in sterilization of the skin. (3) Eternal vigilance is the price of asepsis.

The program for our annual meeting is complete in this issue. We are unable, however, to definitely announce the names of the speakers at the evening session for the reason that men in service are uncertain as to their location at any given time. We can, however, assure our members that interesting men who have a definite message will address you in addition to Dr. Inches and Dr. Wishart.

Please remember that special tickets will be required for the Clinics at Camp Custer and for the Patriotic Meeting in the theatre.

Every member should observe that under no condition will they be permitted to carry a camera, or take any pictures within the boundary of Camp Custer.

Note well that there will be no parking facilities for private automobiles on the road to Camp Custer or within the Camp. Do not attempt to use your auto in the Camp or going to the Camp.

Our Hosts have arranged the necessary transportation within the Camp domains.

Use the "Auto Service" in reaching the Camp from Battle Creek.

We asked a good and staunch friend to suggest a name that might be used in referring to the Germans as we were somewhat desirous of eliminating that word from our vocabulary. The following is his suggestion:

As a designation for your purpose: *Pediculus* (singular) and *Pediculi* (plural) would be better than "vermin" which has no singular form. Why *Pediculi*? Because a universal pest, loathsome and nasty, despised by the decent, extremely efficient, persistent and without sensibility. I have already in some communication referred to the Kaiser as the "sanctimonious crocodile" which I think fits him personally pretty well.

At the time of going to press we are endeavoring to secure from the war office the several reels of films depicting reconstructive surgery of wounded soldiers and the results obtained. We feel we shall succeed in obtaining this film and that we will be able to announce in the official program, that will be given you on registration, at what meeting it will be exhibited.

We recall that that Gerard in his book recites that during a certain conversation a Hun official stated that the Huns had 500,000 loyal subjects who would revolt if America entered the war. Gerard states that he replied: "Yes and we have 500,001 lamp posts in the United States to hang them on if they do." It occurs to us that it might be well to polish up some of these lamp posts at the present time and use them as Gerard intimated they would be used. Such is the treatment every "Pro-Hun" deserves.

How often have you written to your fellow member who has entered the service. We know he will welcome a breezy letter giving all the local news. You owe at least that much to the boys on duty.

We urge that you thoughtfully, and with deliberate reflection, read Surgeon-General Gorgas' letter in this issue. If your local community and family can spare you do not delay filling your application for a commission. It is really incumbent upon our larger cities to supply these needed doctors. You of Detroit, Grand Rapids, Saginaw, Bay City, Jackson, Battle Creek, Kalamazoo, Flint—the call comes direct to you. Are you willing to go? You are needed by June 1st.

The Society purchased \$1,000 worth of the third issue of Liberty Bonds. We are preparing to invest all of our surplus funds in Liberty Bonds when the fourth issue is made.

Correspondence

March 22, 1918.

Many thanks for your good letter which only reach me the other day—the reason for the delay being that I have been out of postal communication for the past six weeks.

Have just returned from a very interesting detail with the Belgian army where I saw many things of interest in the treatment of war wounds which will be of untold benefit in the treatment of civil wounds also.

Most important of these is the treatment of infected joints by incision for drainage, frequently multiple, and what they term constant motion. The patient is made to flex his own limb every two hours or so—no irrigation or tubes. Six weeks or more after you could not tell which limb had been involved by watching the patient walk or work.

Sure, I will try to obtain some relics for you if possible—but I cannot promise. Next to the last time that I was at the front I promised two of the men here to bring them back helmets, etc. Well, after the advance, I went out in the Hun trenches and loaded up with several pounds of plunder and started to walk back to where my machine was parked. Well, to make a long story short, when I got there I didn't have a damn thing left and probably would have been minus my own tin-hat and gas mask if I hadn't had the things strapped on. I don't think I was scared either—just trying to be a little more cautious. This is not for publication in the journal, however, as it is one of the tales that I have not written to my wife. I always try to make her think that the streets of Detroit are more dangerous than any place that I am apt to go here.

By the way, I do not see the Journal, as you enquired—but sure would like to.

Give my best regards to all my good friends in Grand Rapids.

Sincerely,

Camp Custer, April 12, 1918.

My Dear Dr. Warnshuis:

I wish to thank the Michigan State Medical Society, through you, for the invitation to be present at the Patriotic Meeting to be held at the Battle Creek Opera House on the evening of May 8th in connection with the 52d annual meeting of your Society, and for your additional kindness in placing a box at my disposal.

As public speaking is not in my line, I have hesitated in accepting your invitation to make an address on that occasion. Your printed program, however, has my name on the list of speakers, and I see no way of escape.

Very sincerely yours,

C. W. KENNEDY.

YOUR COUNTRY CALLS

**The following letter is self explanatory.
What are YOU going to do? Will you go?
The need of your services is imperative.
This call means YOU!**

Washington, April 8, 1918.

From: The Surgeon General.

To: Editor, Michigan State Medical Society Journal,
Grand Rapids, Michigan.

Subject: Medical Reserve Corps.

1. I wish to call to the attention of the profession at large the urgent need of additional medical officers. As the war progresses the need for additional officers becomes each day more and more apparent. Although the medical profession of the country has responded as has no other profession, future response must be greater and greater. The Department has almost reached the limit of medical officers available for assignment.

2. I am, therefore, appealing to you to bring to the attention of the profession at large the necessity for additional volunteers. So far the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active or the fighting phase, a phase which will make enormous demands upon the resources of the country. The conservation of these resources, especially that of man-power depends entirely upon an adequate medical service. The morning papers publish a statement that by the end of the year a million and a half of men will be in France. Fifteen thousand medical officers will be required for that army alone. There are today on active duty 15,174 officers of the Medical Reserve Corps.

3. Within the next two or three months the second draft will be made, to be followed by other drafts, each of which will require its proportionate number of medical officers. There are at this time on the available list of the Reserve Corps, an insufficient number of officers to meet the demands of this draft.

4. I cannot emphasize too strongly the supreme demand for medical officers. Will you give the Department your assistance in obtaining these officers? It is not now a question of a few hundred medical men volunteering for service, but it is a question of the mobilization of the profession that in the large centers of population and at other convenient points as well as at all Army camps and cantonments, boards of officers have been convened for the purpose of examining candidates for commission in the Medical Reserve Corps of the Army. An applicant for the Reserve should apply to the board nearest his home.

5. The requirements for commission in the Medical Reserve Corps are that the applicant be a male citizen of the United States, a graduate of reputable school of medicine, authorized to confer the degree of M. D., between the ages of 22 and 55 years of age, and professionally, morally and physically qualified for service.

6. With deep appreciation of any service you may be able to render the Department,
I am

W. C. GORGAS.

Surgeon General, U. S. Army.

Washington, April 5, 1918.

The Editor, Jour. Mich. State Med. Society,
Grand Rapids, Mich.

Dear Sir:

In view of the reports in current medical literature of untoward results from the use of arsphenamine and neoarsphenamine, I have to request that you give publicity to the statement that it is requested that samples of any lots of these arsenicals which have shown undue toxicity be forwarded to the Hygienic Laboratory for examination.

In sending these samples it should be ascertained that the lot number is the same as that of the ampoules used on patients. The samples sent should, if possible, be accompanied by a brief note stating the approximate body weight and age of the patient, the dose and dilution of the drug given, the symptoms and result; that is, whether fatal or not.

Respectfully,

S. W. McCox, Director.

Washington, D. C., March 19, 1918.

Journal of Michigan State Medical Society,
Grand Rapids, Michigan.

Gentlemen:

As you are aware there is urgent need for the country to use with the utmost care, our stocks of sugar, alcohol and glycerin. It has come to our attention through the work of Professor Wimmer of New York and Mr. F. A. Upsher Smith of St. Paul, Minn., that it is possible to reduce largely the amount of these materials used in medicines by the adoption of infusions, decoctions and solid forms of medication, such as capsules, in place of elixirs, syrups, fluid extracts and tinctures.

As the choice of medicine rests with the physician we feel that the extent to which this conservation program is successful rests largely with the physician and we urge upon physicians throughout the country the desirability of prescribing extemporaneously wherever possible.

It is really desirable that the editors of Pharmaceutical and Medical journals, Deans and Professors of Colleges, and Secretaries of State, County and City Associations should see that the matter is fully discussed at meetings of physicians and druggists and should do all within their power to assist this conservation movement, which cannot fail to be of material assistance to the country since "Food Will Win The War."

May we depend upon you for your active co-operation in this matter?

Yours very truly,

UNITED STATES FOOD ADMINISTRATION,

Per CHARLES W. MERRILL,

Division of Chemicals, Sisal and Jute,

Deaths

BARTLETT H. McMULLEN, M.D., F.A.C.S.

Cadillac, 1857-1918.

**Physician, Surgeon, Councilor, Mayor
of Cadillac**

Died at His Son's Home in Minneapolis, Minn., at 3 A. M., April 1, 1918.

Dr. B. H. McMullen, of Cadillac, Member of the Council of our State Society, died at the home of his son in Minneapolis on April 1st, 1918, after a prolonged illness. Death resulted from leukemia. He was buried in Cadillac on April 4.

During a period of more than a quarter of a century Dr. Bartlett H. McMullen has been engaged in the practice of medicine and Surgery at Cadillac, Michigan, and in this time has become known as one of the leaders of his calling in this part of the State. A man of high attainments and great force of character, he has exerted an influence for good in various lines of activity in the city of his adoption, having acted as Mayor in 1907-08 and is not alone a skilled Physician and Surgeon but a man of excellent business ability. Dr. McMullen is a Canadian by nativity and was born in Stratford, Ontario, Sept. 15, 1857, a son of John S. and Margaret (Holland) McMullen.

Dr. McMullen received his early education in the public schools of Michigan, and began to study medicine under the preceptorship of Dr. W. E. Magill, of West Bay City. In 1876 he became a student in the Detroit Medical College, from which noted Institution he was graduated March 4, 1879, with the degree of Doctor of Medicine. He immediately established himself in practice at Morley, Michigan, which was the scene of his endeavor until 1888 when he came to Cadillac. This city has continued to be his field of practice to the present time. He has built up an excellent professional business by reason of his ability, his experience and his kindly, sympathetic nature, and is known among his professional brethren as one who strictly adheres to the unwritten ethics of his profession. He has never ceased to be a close student and in 1890 took a post-graduate course in New York City, in 1899 a course in the Polyclinic Hospital of that Metropolis, and since he has taken various other Hospital and Lecture courses in this country and in Europe. By his membership in the Michigan State Medical Society, of which he has been Councilor for the Ninth District since its re-organization in 1904, and the American Medical Association, he kept fully abreast of the constant advances made in medicine. The Doctor was especially well known in the field of sur-

gery, was division surgeon of the Ann Arbor Railway and chief surgeon of the Mercy Hospital, and his offices are equipped with the latest improved instruments. He has been successful in his business ventures, and at the time of his death was interested in the Weber-Benson Drug Co., the Cadillac Chair Co., St. Johns Table Co., all of Cadillac. He was a Knight Templar Mason and a Pythian Knight.

Dr. McMullen was married Sept. 7, 1892, to Miss Alice M. Samsand. They have three children: Florence, who is the wife of Charles A. Jewett, of Cleveland, Ohio; Donald, who married Helen Diggins, daughter of the junior member of the firm of Cummer-Diggins Co. of Cadillac; and Edward of New York City, a talented musician, who has spent three years in advanced study at Munich, Germany.

John S. McMullen was born at Kingston, Canada in 1832 and there received good educational advantages, being graduated from the Kingston High School. He subsequently adopted the profession of civil-engineering and in 1856 came to Saginaw, Mich., where he entered the lumber business until his death in January, 1912. He was a man of much executive and organizing ability and stood high in the confidence of his business associates, who looked to him constantly for counsel and advice. In politics a Democrat, he took an active and leading part in local matters, and his fraternal connection was with the Independent Order of Odd Fellows. Mr. McMullen was married in 1853 at Detroit, Mich. to Miss Margaret Holland who was born in 1830 in Ireland and she died in 1904 in Seattle, Washington, having been the mother of four sons and two daughters, as follows: Dan H., who is engaged in the lumber business at Minneapolis, Minn. and Seattle Wash.; Dr. Bartlett H., of this review; Dave and John who are engaged in the coal and wood business at Seattle, Wash.; Margaret, a teacher in the schools of Memphis, Tennessee; and Minnie, who is now Mrs. Jas. Armstrong, living at Butte, Montana.

Dr. Edwin H. Bailey of Flint died of pneumonia on April 4th after a brief illness. Dr. Bailey was born in Detroit, was a graduate from the Detroit Homeopathic College in 1903 and began his practice in Flint about seven years ago.

We have also received notice of the death of Dr. Frank M. Gier of Hillsdale, Dr. T. T. Hubbard of Grand Rapids, Dr. Frederick Gill of Alma, and Dr. Freeman Hall of Kalamazoo.

State News Notes

Dr. John D. Demay has instituted proceedings against Dr. C. G. Parnall, health officer of Jackson, claiming \$25,000 damages. The suit is the outcome of the recent arrest of Dr. Demay who was alleged to have failed to report a case of smallpox. The jury which tried the case rendering a verdict of acquittal on direction of the preceding judge.

At one of its April meetings the Wayne County Medical Society unfurled a service flag with 117 stars. The stars were sewed on by the mother, wife or sweetheart of each member in active service. Incidentally why shouldn't every hospital in the state fly its Service Flag?

Dr. Raymond S. Goux, of 545 David Whitney Bldg., Detroit, Mich., has been commissioned First Lieutenant in the Medical Officers Reserve Corp, Dept. of Head Surgery, and ordered to Hazelhurst Aviation Field, Mineola, Long Island.

No doctor can afford to miss the Battle Creek meeting. Never again will the opportunity be presented to the society to spend a day in a National Cantonment and witness army maneuvers and demonstrations.

Major R. C. Balch of Kalamazoo, for several months surgeon at the Base Hospital at Camp Custer has been ordered East, presumably for Overseas duty.

The Seniors of the Detroit College of Medicine and of the Medical Department of the U. of M. have been invited to attend the demonstrations at Camp Custer.

If you desire the Society to hold its next annual meeting in your city please place the invitation in the Secretary's hands during the first session of the House of Delegates.

Dr. George L. Le Fevre of Muskegon who recently underwent a cholecystectomy is convalescent and after a few weeks' rest in the east will resume his practice.

The Council of Detroit has voted \$30,000 to the Detroit College of Medicine and Surgery. Details of a plan for creating a Detroit University are being perfected.

Note the date—Battle Creek, May 7, 8 and 9th.

Dr. Reuben Peterson of Ann Arbor has been devoting practically all of his time visiting the several draft boards throughout the state.

Dr. Toles of Lansing is convalescent from an acute middle ear and mastoid involvement.

Dr. A. P. Biddle is now acting Chairman of the Detroit Board of Education.

The Tri-State Medical Association met in annual session in Detroit on April 9th.

The State Board of Registration will hold its summer examination in Detroit, June 1 to 3 and in Ann Arbor, June 21 to 24.

Do not forget to secure your Special Tickets to the Clinics at Camp Custer.

Dr. Frank A. Zastrow of Lapeer and Miss Eleanor A. Perkuis of New York were married March 21st.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

GRATIOT-ISABELLA-CLARE COUNTY.

The March meeting of the G. I. C. County Medical Society at Brainerd's Hospital in Alma, March 21st. Meeting was called to order by President Hall with six members present.

Minutes of previous meeting were read and approved. Communications were read from the Council of National Defense, which was referred to Dr. W. E. Barston for action, and from the A. M. A. relative to the Owen Dyer Bill. The Secretary was instructed to write the Senators and Congressman relative to the latter.

Dr. J. N. Day, Jr., then read a very instructive paper entitled "Bacteria and Their Products in the Cure of Disease." This was discussed by Drs. Brainerd and Berstow.

E. M. HIGHFIELD, Secretary.

DICKINSON-IRON COUNTY

At a meeting of the Dickinson-Iron County Medical Society held at Iron Mountain, April 15, 1918, the following officers, all of Iron Mountain, were elected:

President—J. A. Crowell.

Secretary-Treasurer—L. E. Coffin.

Delegate to State Meeting—J. A. Crowell.

Alternate—H. A. Newkirk.

The following resolution was adopted:

Whereas our fellow member Elisha P. Swift, has been summoned to answer "The Long Distance Call" for which we all wait,

Therefore, be it resolved that this Society, we as individuals and the community at large, have suffered the loss of a gentle companion, a conscientious practitioner and an honest man.

Be it further resolved, that these resolutions be

spread upon the minutes of the Dickinson-Iron County Medical Society; a copy be presented to Mrs. Swift and that they be published in the *Michigan State Medical Journal*.

HOUGHTON COUNTY

The February meeting of the Society was held at the Calumet Social Club, Laurium, Feb. 4th.

A motion was passed to pay the State dues of the Members in Active Military service and to maintain them in good standing in the Society without the payment of the County dues.

Dr. J. H. Charters presented a very interesting paper on "The Etiology and Diagnosis of Carcinoma of the Mammary Gland and Uterus."

Luncheon was served in the Club's dining room.

The March meeting was held at the Douglass House in Houghton, March 4th.

Dr. Fred Z. Havens and Dr. Robert S. MacKnight were elected to membership.

Dr. Geo. M. Rees presented a paper entitled, "Abdominal Adhesions," discussing their occurrence and prevention and emphasizing particularly the formation of adhesions following the careless use of solutions, such as bichloride solution.

Dr. H. M. Joy then read a paper entitled, "Colloid Carcinoma of the Peritoneum," and gave the history of a case of this rare affection. The case has been operated four times with recurrence each time.

The April meeting was held in Laurium, April 8th.

Drs. John F. Barton and James M. Walsh were elected to membership.

Communications from Capt. J. D. McKinnon and Capt. B. H. Olmsted, in service, were read.

Two papers were presented and discussed by the

Society, the first by Dr. S. Levin on, "So-Called Bladder Diseases," the second by Dr. R. M. Howell, entitled "Epidemic Meningitis," based on twenty-eight cases during the past year in Cook County Hospital. Both papers were exceptionally well prepared and of great interest.

The Society then adjourned to luncheon.

D. E. GODWIN, Secretary.

INGHAM COUNTY.

A regular meeting of the Ingham County Medical County Society was held at the Chamber of Commerce, Lansing, March 12th, 1918.

Doctor R. E. McCullough, formerly of Mason, was granted transfer to the Genesee County Medical Society because of his removal to Flint. A letter from Doctor Clara M. Davis of the "American Fund for French Wounded" and in service in France was read.

Following is the program:

"Report of Three Recent Cases of Laryngeal Diphtheria,"

Dr. Freeman A. Jones, Lansing.

"Venereal Disease,"

Dr. R. M. Olin, Secretary of the State B. of H.
"Prostatic Obstruction and Its Effect on Renal Function,"

Dr. H. W. Plaggemeyer, Detroit.

From Doctor Olin's talk on the work Michigan is doing to cope with the venereal situation, a discussion arose which culminated in a motion that a committee be appointed by the President to report at a special meeting on a method for carrying on a Venereal Clinic in Lansing.

Doctor Plaggemeyer's scholarly paper was much appreciated. He dealt with the detailed anatomy of the region about the neck of the bladder and discussed at length the mechanical and physiological problems which frequently present.

On March 26th, 1918, in the evening, a Tuberculosis Clinic conducted by Doctor E. B. Pierce of the State Sanitarium at Howell replaced the usual program. This was held at the Edward W. Sparrow Hospital, Lansing. Nine illustrative cases were selected and demonstrated from the fourteen or fifteen patients furnished for the clinic. Inspiration for early diagnosis was certainly created. Doctor Pierce made a plea for greater uniformity of considerations for arriving at definite conclusions in a tuberculous suspect.

EARL I. CARR, Secretary

Sodium Cyanid.—Loevenhart, Lorenz, Martin and Malone report experiments looking toward the use of sodium cyanid, administered intravenously, as a means of stimulating respiration in threatened collapse from drowning, etc. (Jour. A.M.A., March 9, 1918, p. 692).

Book Reviews

DISEASES OF THE SKIN. By Melton B. Hartzell, A.M., M.D., LL.D., Professor of Dermatology in The University of Pennsylvania. Published by J. B. Lippincott & Co. Price \$7.00.

This is an entirely new work from the pen of the author and embodies the most recent advances in the subject. The pathological classification, which is coming to be the universally accepted system is followed in the arrangement of the book. The text is truly a careful, studious attempt to describe the distinguished characteristics of the many diseases of the skin in a concise, lucid style. The plates and illustrations are excellent in their detail and well chosen.

CLINICAL DIAGNOSIS. By Charles E. Simon, B.A., M.D., Professor of Clinical Pathology and Physiological Chemistry in The University of Maryland Medical School and The College of Physicians and Surgeons, Baltimore, Md. Published by Lea & Febiger, Philadelphia and New York. Price \$6.00.

We take pleasure in recommending this book as an excellent, thorough, up to date description of laboratory methods of diagnosis. Subjective symptoms are frequently indefinite and misleading. A laboratory analysis while not always of such great diagnostic significance is, nevertheless, precise and positive. A few moments reflection on such tests as the Wassermann, the Widal, urinalysis, the kidney function tests, blood and throat cultures, etc., will soon convince one of the extent to which the profession has come to rely on the laboratory technician. A valuable feature of this book to the student and practitioner alike is the separation of the technical details from the discussion of the indications for and the significance of chemical and microscopic tests.

MANUAL OF VITAL FUNCTION TESTING METHODS AND THEIR INTERPRETATION. Second Revised and Enlarged Edition. Wilfred M. Barton, M.D., Associate Professor Medicine, Georgetown, University. Price \$2.00. Richard G. Badger, Publisher, Boston.

The problem of investigating the various vital functions of the organisms, especially those of the heart, liver, pancreas, kidneys and ductless glands, is fast assuming a highly important and even a paramount position in pathological diagnosis.

A great and ever increasing literature in many languages dealing with the subject of vital function exploration is proof of the great interest which is being taken by medical men in this newly developed field.

The great strides which have been made in recent years in all departments of vital function exploration, the discovery of new methods and tests, together with the mass of casuistic and critical literature which has appeared, have rendered it highly important that all this correlated material should be

collected together in book form. In this book the author has taken up systematically the various vital organs and described all the tests of any importance which have been devised for testing their functional capacity.

The book is intended by its author as a practical manual. The facts contained in it have been collected from widely scattered sources.

INTERNATIONAL CLINICS. Vol. I, Twenty-Eighth Series. 1918. Philadelphia and London. J. B. Lippincott & Co.

A glance over the contents of this work will indicate its great value and interest to the busy practitioner. There are several papers of unusual merit in this number. The lectures by Charles Greene Cumstom on injuries to the cranium and brain in war-fare give an impressive insight into the wonderful technic that has been evolved in this branch of surgery. Dr. Victor D. Leppinasse reports several cases illustrating the operative treatment of sterility in the male. There is an interesting exposition of joint diseases illustrated by some striking roentgenograms.

THE MEDICAL CLINICS OF NORTH AMERICA. Vol. I, No. 4. Published bi-monthly by W. B. Saunders & Co., Philadelphia and London.

The subjects of common interest covered in this number are myocarditis and heart-block, diabetes, eczema in childhood, surgical diseases of the upper abdomen and bronchial asthma. The review of cases coming under these heads and the description of the methods used are very instructive as they are conditions which must be dealt with constantly in general practice. Pyelitis of Infancy, an obscure condition to diagnose, comes in for a thorough discussion by Rich M. Smith of The Massachusetts General Hospital.

THE SURGICAL CLINICS OF CHICAGO. Volume II, Number I (February, 1918). Octavo of 226 pages, 73 illustrations. Philadelphia and London: W. B. Saunders Company. 1918. Published Bi-Monthly: Price per year: Paper \$10.00; Cloth \$14.00.

NEW AND NONOFFICIAL REMEDIES, 1918, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1918. Cloth. Price, postpaid, \$1. Pp. 452 + 26. Chicago: American Medical Association, 1918.

This annual should be in the office of every physician. It lists and describes all those proprietary remedies which the Council on Pharmacy and Chemistry has examined and found worthy of the confidence of the medical profession; that is, articles the composition of which is disclosed, which are exploited truthfully and which give promise of some probable therapeutic value. The description of each article aims to furnish a statement of its therapeutic value and uses, its dosage and method of administration as well as tests for the determina-

tion of its identity and quality. Articles of similar composition are grouped together and in most cases each group is accompanied by a general article which compares the members of a group with each other and with the established drugs which they are intended to replace. The description of the individual articles and the general discussions are written by experts and furnish information of a trustworthiness unsurpassed by any other publication. The book is especially valuable to the busy physician who desires a concise and up-to-date discussion of such subjects as digitalis therapy, the newer solutions for wound sterilizations, iron therapy, food for diabetics, the value of sour milk therapy and of the bulgarian bacillus, the use of radium externally and internally, or arsphenamine (salvarsan, arsenobenzol, diarsenol) and neoarsphenamine (neosalvarsan, neodarsenol), of local anesthetics, and other advances in therapeutics.

In addition to this annual issue of the book, supplements are sent from time to time to purchasers. With this volume for ready reference, the physician will be able to determine which of the proprietary remedies that are brought to his notice deserve serious consideration. At least he will be justified to subject to close scrutiny those which have not met the requirements for acceptance for New and Nonofficial Remedies.

The book is sent, postpaid, for one dollar. Address the American Medical Association, 535 North Dearborn Street, Chicago.

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1917. Cloth. Price, postpaid, 50 cents. Pp. 169. Chicago: American Medical Association, 1918.

This volume contains the reports of the Council which were adopted and authorized for publication during 1917. It includes reports of the Council previously published in *The Journal of the American Medical Association* and also reports which, because of their highly technical character or of their lesser importance, were not published in *The Journal*.

In this volume the Council discusses the articles which were examined and found to be in conflict with the rules for admission to New and Nonofficial Remedies. Among these reports are discussions of such widely advertised proprietaries as Corpora Lutea (Soluble Extract), Wheeler's Tissue Phosphates. The Russell Emulsion and The Russell Prepared Green Bone, Trimethol, Eskay's Neuro Phosphates, K-Y Lubricating Jelly, Ziratul, Hepatico Tablets, Hemo-Therapin, Venosal, Surgodine and Kalak Water. A report on Iodeol and Iodagol covers 51 pages and illustrates the exhaustive investigation which the Council is often obliged to make of proprietary articles. Similarly illustrative of the

Council's thoroughness is the clinical study of Biniodol, a solution of mercuric iodid in oil, and the investigation of Secretin-Beveridge, made for the Council by the physiologist, Professor Carlson, of the University of Chicago. The volume also contains reports which explain why certain preparations, such as Alcresta Ipecac tablets, the German-made biologic products and antistaphylococcus serum, which were described in the last edition of New and Nonofficial Remedies, are not contained in the current 1918 edition. Those who wish to be informed in regard to proprietary remedies should have both the annual Council Reports and New and Nonofficial Remedies.

THE MEDICAL CLINICS OF NORTH AMERICA. Volume 1 Number 4. (The Boston Number, January, 1918). Octavo of 401 pages, 128 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published Bi-Monthly. Price per year: Paper, \$10.00; Cloth, \$14.00.

Miscellany

Calcium Iodide in Tuberculosis.—There appears to be no work to indicate that the intravenous administration of calcium iodide in tuberculosis is of value. It has not been demonstrated that tuberculosis is associated with a deficiency of calcium. On the other hand, experiments demonstrate that the administration of calcium does not change the calcium content of the blood. Furthermore, there is no evidence to warrant the intravenous administration of iodides. (*Jour. A.M.A.*, Feb. 16, 1918, p. 481).

Tyree's Antiseptic and Aseptinol.—Revolutionary changes in the medical sciences have been so numerous and so rapid that the general practitioner has been unable to keep pace with them. In the resulting confusion the nostrum maker has seen his opportunity for exploiting his useless, unscientific or dangerous preparation. Because of the danger of therapeutic chaos, the American Medical Association established the Council on Pharmacy and Chemistry to place the results of therapeutic progress before the medical profession in an impartial manner. Are you availing yourself of the work of the Council, or are you prescribing proprietaries on the advice of their promoters or are you using drugs of established value? Are you prescribing "Tyree's Antiseptic," so-called, or are you using an antiseptic about which there is no mystery, for which no false claims are made and which is really effective??

Tyree's Antiseptic Powder was claimed to be a combination of "borate of sodium, alumen, carbolic acid, glycerin and the crystallized principles of

thyme, eucalyptus, gaultheria and mentha." "Pulv. Aseptinol Comp." is claimed to combine boric acid, the salts of aluminum, crystallized phenol, and the active crystalline principles of thymus, mentha and gaultheria. As a twin may differ from his brother by a wart, so Aseptinol was claimed to contain hydrastis canadensis in addition. An analysis of Tyree's Powder showed it be essentially a mixture of boric acid, zinc sulphate with insignificant amounts of odorous principles. In view of the misrepresentation in one case, it is difficult to understand why it should have been taken for the model of the other. These twin nostrums have been exploited by similar preposterous claims; they are utterly unfit for the treatment of the various conditions for which they are to have been recommended.

More important than the relative merits of nostrums such as these is the question whether the medical profession is going to help to perpetuate the chaotic conditions that the use of such nostrums fosters. (*Jour. A.M.A.*, March 30, 1918, p. 949).

Luminal.—Chemically, luminal is phenyl-ethyl-barbituric acid, and differs from veronal only in that one ethyl group is replaced by a phenyl group. Luminal is claimed to be a useful hypnotic in nervous insomnia and conditions of excitement of the nervous system. (*Jour. A.M.A.*, Feb. 23, 1918, p. 559).

Hypophosphites for the Army.—The purchasing department of the medical department of the U. S. Army asks for bids on three tons, on one pound bottles, of the "Compound Syrup of Hypophosphites." These six thousand bottles of a relic of past generations must be paid for and are to occupy valuable freight space in shipping to various Army posts. (*Jour. A.M.A.*, March 16, 1918, p. 783).

Melubrin.—Chemically, melubrin is closely related to antipyrine. It acts as an antipyretic and analgesic and is said to be useful in sciatica, neuralgias and in febrile affections, and as an antipyretic in febrile affections. In Sollmann's Pharmacology, in a discussion of coal-tar antipyretics, it is stated that practical experience has shown that acetphenetidin, acetanilid and antipyrine are the most useful representatives of the group, and that all the others may well be spared. (*Jour. A.M.A.*, March 23, 1918, p. 874).

Medeol Suppositories.—The Council on Pharmacy and Chemistry reports that Medeol Suppositories appear to be an imitation of Anusol Suppositories which in 1907 were found inadmissible to New and Nonofficial Remedies. "Anusol" was formerly said

to be bismuth iodoresorcinsulphonate, but after publication of an analysis in the A.M.A. Chemical Laboratory in 1909, this claim was abandoned and today Anusol Suppositories are said to contain unstated amounts of the indefinite "bismuth oxidid and resorcinsulphonate." "Medeol" is said to be "resorcinated iodo bismuth," but no information is vouchsafed as to the character or composition of the ingredient. As the composition of the two preparations are similar, so are also the therapeutic claims. The Council declared Medeol Suppositories inadmissible to New and Nonofficial Remedies because their composition is secret, because unwarranted therapeutic claims are made for them, because the name is objectionable, and because the combination is unscientific. (*Jour. A.M.A.*, March 9, 1918, p. 719).

Some Misbranded Nostrums.—"Notice of Judgment," reporting prosecutions for misbranding under the Federal Food and Drugs Act, have been issued for the following: Hayseen's Sure Goitre Cure Balsam, a solution of potassium iodid in water, sugar and alcohol. Hayseen's Sure Goitre Ointment, containing petrolatum and potassium iodid. MacDonald's Atlas Compound Famous Specific No. 18, consisting essentially of sodium sulphate, sodium bicarbonate, a laxative plant drug (apparently aloes), ginger, a small amount of phosphate, a trace of alkaloid and talc. Faucine, said to be a "warranted remedy" for piles, diarrhea, dyspepsia, scratches of horses and "good" for female complaints, "hog cholera" and other conditions. Contrell's Magic Troche, containing a little ipecac and claimed to cure catarrh, asthma and diphtheria. Benn Capsules contain strychnin, arsenic, iron and water soluble sulphates, and are sold as a cure for dyspepsia, backache, headache, leukorrhea, falling of the womb, etc. Collins' Voltaic Electric Plasters, claimed to relieve pain and inflammation of the kidneys, of value in fever and ague and "good" for simple bone fracture, and would relieve many cases of bronchitis and asthma, female weakness, etc. Mother Noble's Healing Syrup, containing vegetable cathartic drugs, iron chlorid, Epsom salt and sand. Stuart Buchu and Juniper Compound, containing no appreciable amounts of buchu and juniper. (*Jour. A.M.A.*, March 9, 1918, p. 718).

Thyroid Hyperplasia and Iodin.—The evidence indicates that simple goitre is associated with a deficiency of iodine in the thyroid gland and that goiter formation may be prevented by iodine administration. Marine and Kimball have undertaken a study of goiter prevalence and its prevention by administration of iodine at the request of the Committee on Therapeutic Research of the Council on

Pharmacy and Chemistry. In a complete census of the condition of the thyroid gland in girls from the fifth to the twelfth grades of a school population of a large community at the southern edge of the Great Lakes goiter district, they found that 2,184 or 56 per cent., had enlarged thyroids, 13 per cent. having well defined persistent thyroglossal stalks (*Jour. A.M.A.*, March 23, 1918, p. 848).

CHLORETONE: SUGGESTIONS FOR DOSAGE.

For its hypnotic effect Chloretone may be administered in doses sufficient to produce the desired result without endangering the life of the patient. As one writer points out, it is useless to expect to attain that end by giving the patient small doses—5 grains—at long intervals—three times daily. In general, a single dose, of 5 to 20 grains, will have the best effect. It would be well to give about 10 grains the first night, 15 the second, and 20 grains the third. When a dose is found that produces the desired result, the same dose may be repeated until the "sleep habit" has become established, when it should be reduced gradually.

When the use of Chloretone must be continued for a protracted period, as in the treatment of epilepsy, its effects should be watched lest a cumulative action manifest itself. It should not be pushed to the point of dullness and drowsiness.

As a sedative in asthma, chorea, pertussis, nausea, emesis gravidarum, and seasickness, doses of 3 to 10 grains, at stated intervals according to the effect, are generally sufficient. As a preventive of post-anesthetic nausea the administration of ether, is the usual practice.

The principal effects of Chloretone are manifested upon the central nervous system. It acts like other hypnotics, but, unlike most of the latter, it does not depress the circulatory system, nor does it disturb digestion.

Chloretone is procurably in 3-grain and 5-grain capsules, convenient for administration.

LEST YE FORGET
THE
ANNUAL MEETING
WILL BE HELD
THE
7th, 8th and 9th
of May

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVII

GRAND RAPIDS, MICHIGAN, JUNE, 1918

No. 6

Original Articles

THE DUTY OF THE HOUR IS SERVICE*

ANDREW P. BIDDLE, F.A.C.P.

DETROIT, MICH.

I would be derelict to my strongest feelings did I not first take this opportunity to express to you, members of the Society here assembled for its 53rd Annual Meeting, my deep appreciation of the honor you conferred by choosing me to preside over your deliberations. Our depleted ranks, depleted by the war service of our absent members, renders the task more sacred. But it is to review in part the service of those of us who for one reason or another, be it age, disability, family dependents or responsibility, college or hospital association, have and must remain at home; *and to urge each one of us to greater service*, that we may in a measure be found worthy with our absent brothers, that I shall devote the short space of time allowed the presiding officer on this occasion. Not one of us but is proud of the devotion to duty of those who have been selected for service; we envy them the privilege. No one ever doubted but that the Medical Profession would be true to its ideals and to its traditions. The battle fields of Europe have proved, were proof needed, that the first have in no way been dimmed or the latter forgotten. All glory and honor to those who have gone!

STATE AND COUNTY COMMITTEES.

The magnitude of our fight for free institutions and democracy has enlisted the services of not a few of those at home, but should render obligatory the enrollment in one capacity or another in the service of the government of every member of our profession. The duty and hour of service is at hand; the privilege of rendering it we should grasp. Long before this country abandoned its neutrality to engage with our Allies in this world wide conflict

members of the profession had offered their services to the fighting and devastated countries of Europe and the profession at home had begun to organize in anticipation not of conflict—for it was then universally hoped and prayed for that we would not be drawn into the war—but for humanitarian purposes. This was exemplified more particularly in the work of the Red Cross when the final draft governing the "Regulations of the National Committee in Red Cross Medical Service" was approved May, 3, 1916, by the special committee to which these regulations had been referred. Under their provisions State committees of nine physicians were appointed, three members each of which were selected by the President of the American Medical Association, the President of the Congress of American Physicians and Surgeons and the President of the American College of Surgeons (one to be the President of the State Medical Society). This committee was later merged into the State Committee of National Defense. Local committees were to aid for enrollment for service in case of war of those "physicians willing to serve wherever needed, at home, abroad, in field, hospital, or supply columns or intelligence sections," those "willing to serve in the home country only" and those "willing to serve at place of residence."

In April, 1916, a National Committee was appointed by the above named Presidents in addition to the President of the American Surgical Association and the President of the Clinical Congress of Surgeons of North America, to which Committee was "delegated the responsible duty of formulating plans whereby the civilian medical resources of the United States might be ascertained and effectively coordinated for such purposes as might be referred by the Federal Government;" the President and the Secretary of the State Medical Societies to be members of their respective State Committee during their incumbency in office. "From the first it was contemplated that at the proper time the organization of committees

*Presidential address, 53rd Annual Meeting, Michigan State Medical Society, Battle Creek, May 7th-9th, 1918.

would be perfected in each County of the Country," the County Committee "to bear the following distinguished name, to wit, The Auxiliary Medical Defense Committee of County of, State." These Committees were to aid in gaining "needful information regarding the civilian medical resources of their own communities," and to aid "in the efforts to coordinate civilian medical activities for prompt mobilization in case of need;" to secure applicants for the Army and Naval Medical and the Medical Officers' Reserve Corps, the Coast Defense Reserve Corps of the Navy and for the National Guard.

By act of Congress, August 29, 1916, the Council of National Defense was organized "for the creation of relations which will render possible in time of need the immediate concentration and utilization of the resources of the Nation." During October of 1916 and even earlier the Committee of American Physicians for Medical Preparedness began to take inventory of the hospitals of the Country. This list is complete and rests within immediate reach of the offices of the Surgeon-General of the Army and Navy in a circular letter of February 16, 1917, the Director General (Department of Military Relief) of the American Red Cross coordinated the work of the Red Cross with that of the Committee of American Physicians for Medical Preparedness by making the committees of the two organizations "as far as possible identical in composition." On March 5, 1917, a circular letter signed by the Chairman of the Committee of American Physicians, the Chief of the Medical Section, Council of National Defense, and the Medical Member of the Advisory Commission of National Defense, urged "that the various State Committees of the United States should more closely organize in order promptly to co-operate with the authorized national medical bodies and the established agencies of the Federal Government." Sub-committees in each County of 10,000 or more were organized to canvass and to establish as nearly as possible the status of every physician of less than 55 years of age as to his eligibility and desirability for a commission in the Medical Reserve Corps of the Army and Navy.

To simplify the activities of the various State committees reorganization by the General Medical Board was effected in May, 1917, these activities to be assumed by the newly named "State Committee of the Council of National Defense, Medical Section," the committee "con-

siderably to enlarge its membership by the addition of new members who are for one reason or another necessary to its greater usefulness." Let me pause here a moment to attest our sincere appreciation of the untiring, effective and patriotic labor of the member of our Society, who since the inception of the work in Michigan, early in 1916, has been Chairman of the various committees, Major Reuben Peterson, M.R.C., of Ann Arbor, Medical Aide to the Governor of Michigan. I feel I voice the sentiments of the profession of the State and the Country in extending our heartfelt thanks to him and am grateful of this opportunity of giving it public expression.

Physicians and Surgeons of State, National and International renown, many of whom have since entered into active service, have served and are serving on these Committees without thought of other remuneration than the consciousness of duty willingly and gladly performed.

MEDICAL EXAMINING BOARDS.

To examine the candidates for commission in the Medical Officers' Reserve Corps, Medical Boards were early appointed by the Surgeon-General and in this State established at Albion, Ann Arbor, Battle Creek, Detroit, Marquette and the Sault de Ste. Marie. To these boards has fallen the responsibility of the determination of the physical and the mental fitness of the applicants. Upon their tact and judgement has rested the reliance of the Government in the formation of the personnel of the Corps.

When the first draft was called, physicians in every county, village and city throughout the land freely offered their services to the Government as Medical Examiners. Their zeal and their work under the great difficulty of haste, inadequate quarters and lack of knowledge as to what constitutes fitness for military service have been praised again and again by the Provost Marshal General.

Profiting by the experience of the first draft, the Government, when its second call was to be filled, requested the Governor of the several States to nominate the members of the newly created Medical Advisory Boards. These boards, selected by the State Committee of National Defense (Medical Section) at the Governor's request, are scattered throughout the State and are composed of 3 to 7 physicians, trained in their several specialties, to aid in the great task of determining the physical and mental status of the registrants referred to

them. Hundreds of thousands of young men have thus received careful, expert physical examination at great sacrifice of the time and energy of the examiners without expense to the government.

PATRIOTIC COMMITTEES.

Patriotic Committees to provide social and financial aid to the family of a member in the service, where it may be necessary, and to secure a fund of sufficient size to meet the needs of the member upon his return; to safeguard his interest during his absence and to assist in the recovery of his practice on his return, have been formed in almost every county of the land. A great task has fallen upon the members of these Committees, requiring tact, discriminative judgment and a sincere devotion to an ideal. The method of procedure probably varies in each state, but in Michigan it has been found advisable to leave the solution to the individual county, where the needs and wishes of the absent member are best known.

HOSPITALS, COLLEGES AND STATE BOARDS OF HEALTH.

Great as has been the suffering of the smaller communities, for lack of physicians and severe the hardship imposed on those who have remained at home, not less arduous has been the task of the depleted staffs of the hospitals of the cities and the faculties of the Medical Colleges, depleted by the trained operator and the skilled physician and the trained and well beloved teacher. Yet ever in mind the sacrifices of those at the front, these tasks have been and will be unflinchingly borne by those who must remain at home.

Profiting by the mistakes and experiences of Great Britain this Government is already exercising a strong supervision over our medical schools, demanding in spite of the depletion of trained teachers that neither the quantity nor quality of the standards of teaching be diminished; demanding that each school shall fix and maintain its maximum of attendance, and bring its student to the highest point of efficiency and physical development for the service of his country; returning to his former registrant status the physical unfit and him who through lack of educational attainment or by temperament is unfit for military service. Its whip is that the medical student is with few exceptions within the draft age and is held in the enlisted medical reserve during the whole period of his studies and his subsequent hospital year; and, should he fail, is returnable

to his former status. To shorten the long periods of study somewhat the Government may determine that after October of this year every school hold a continuous course, thus saving the student one year in four. To this increasing obligation let us who teach also bend our energy.

These governmental demands and the hard economic condition of war times will probably drive a few schools to the wall. Fortunately some communities have recognized the great and probable greater demand of the civil population at home, the government and devastated and war torn countries of Europe for well educated physicians and have come to the rescue. It is hardly necessary here to go into the reasons for the increasing cost of medical education, but it may not be out of place to say that the City of Detroit has through its officials approved of the budget for the coming year submitted by the Board of Education for the maintenance of the Detroit College of Medicine and Surgery under the said Board and that the medical school will on July first come under the educational system of the City of Detroit. Thus is a great City with a vast educational machinery already in existence, with the abundant clinical material of its hospitals (both private and public) at its disposal, committed to undertake the education of medical students as part of its service to the Government and to humanity. Thus under the guidance of trained educators and under the immediate eyes of the State authorities and the Federal Government will the high standards of medical education be maintained and increased. If backed by the united profession of the City and the State, no greater opportunity to utilize its wonderful resources for the advancement of medical education and to make of the great metropolitan city of the State the medical centre which its importance should compel and to give service to our Government has ever been offered the profession. I cannot believe that it will fail to see clearly its duty and will stand shoulder to shoulder with the Board of Education of the City of Detroit in the latter's endeavors. Thus will the two Medical Schools of the State, the one supported by the State and the other by its City, press forward in the interest of higher medical education, rivals only for the honor of greater service.

State Boards of Health have in every way possible co-operated with the Federal Government to lessen the inroads of disease into our national cantonments and I may be permitted

to point with pride to the good work done by the Michigan Board with the co-operation of a Governor who recognizes the value of health supervision. So good has been the work accomplished that it has received special mention of the Medical Department of the Army and has been held up to other State Boards of Health as an example of what can be accomplished.

MEDICAL SOCIETIES AND JOURNALS.

Naturally the County and State Medical Societies have been the first and most seriously affected by the war, because of the absence of the members who are usually the most interested. Yet the work of these societies should be kept as active as possible in the interest of medical organization. Those at home should make increasing effort to maintain them in their present state of efficiency by frequent attendance and willing co-operation with the officers in perfecting the programs.

The great need of organization, an example of what preparedness has and may accomplish, is shown in the assistance the National, State and County Medical Societies have rendered the Government in the enrollment for the Medical Reserve Corps of the Army and Navy and will render in the new call for 5000 more Medical Officers. This alone has demonstrated the wisdom of the plan and the privilege of rendering such service at this time of the country's great peril is sufficient reward for all the thought and labor expended throughout these many years.

State Medical Journals have probably suffered in the same degree. Our own *Journal* has, fortunately, however, to date at least, been able to retain the services of its most efficient secretary-editor. I cannot refrain from expressing to him our sincerest appreciation for the excellent manner in which it has been conducted under these trying times, both in its professional, editorial and business departments. To my mind it is the best edited State Medical Journal in the United States.

THE WORK OF RECONSTRUCTION AND REHABILITATION.

Profound as will have been the influence of the war upon the social and political life of all nations, none less will it be upon medicine and surgery and it behooves us all much to keep active our medical organizations that we may keep abreast of the advances inculcated in those who will have enjoyed the privilege of service. Thousands of young men will have experienced the benefit of the service of highly

trained medical officers, well equipped hospitals and trained nurses and will demand upon their return as high a degree of efficiency in their medical service. Already a few thousands of the sick and wounded have been returned and to these will be added thousands who are maimed and must be rehabilitated, and to these hospitals of reconstruction and rehabilitation, soon to be created and organized, must our most expert skill be directed. For this reconstruction, re-education and rehabilitation of our soldiers will lead to the reconstruction and rehabilitation in so far as possible of all disabled men, women and children that, after such devastations as are now being witnessed, the races may not perish from the earth. Thus the greatest problem of the age, the conservation of human energy, is unfolding itself.

The cry for service, as you see, is heard from every side. The place for the idler is not to be found. So, unconscious of sacrifice, provident of our strength, unremitting in our zeal, let us reaffirm our faith in a new pledge of service, that the fires at home may be kept burning to the glory of the profession and the liberty of mankind!

MEDICAL WORK IN CAMP CUSTER.*

LT. COL. C. J. BARTLETT,
Division Surgeon.
CAMP CUSTER, MICH.

Mr. Chairman, Ladies and Gentlemen:

When, a few months ago, it was suggested to me a day at Camp Custer as a part of the program for your annual meeting, the possibilities contained in this idea immediately sprang into my mind, and it occurred to me that this contact between the civilian Medical profession and their confreres in the military service could not fail to be of immense benefit to both, and above all, would result in incalculable *value* to our nation in this her hour of labor during the birth of her new army.

Where, but to the Medical profession should a nation, as does an individual, turn for *aid and advice* in such a crisis? Who better fitted than the medical profession to ward off the ills of infancy, the effects of the *indiscretions* of childhood and adolescence, and to safeguard the strength of *maturity*? Our nation demands her children for her own uses. She does more than this; she demands that they shall come to her service with *vigorous* bodies and *active* minds,

*Address delivered at 53d Annual Meeting M.S.M.S., Battle Creek, May 8, 1918.

and that this vigor and activity not only remain unimpaired but that it shall *progressively* increase so that when she has finally gathered her sons around her and sent them forth, they shall *advance*, a resolute and unconquerable phalanx.

In bringing forth and developing such an army, the first requisite is the proper *selection* of men. A stream will flow no higher than its source, and defective men are limited in their development by their *defects*. Soldiers are habitual bearers of burdens, are subject to terrific mental and physical *strain* and it is in consequence of these facts that many men who pursue their daily civil occupations in *apparent* good health, and generally along the lines of least resistance, are found, when subjected to the rigorous physical tests of the Army, *unsuited* for its uses.

It is in the selection of men, therefore, that the civilian doctor makes his first contact with the Army, and those of you who have been members of *Local Boards* must have been astonished and shocked when *one-fifth* of the men forwarded to Camp Custer in the first draft as *fit* for military service were returned by the military authorities as *below standard*.

It has been said and repeated many times that these examinations were conducted in Camp by officers of the *Regular Army Medical Corps* who had *exaggerated* and inflexible ideas as to what should be the minimum physical requirements exacted.

Let us *pause* for a moment and consider this statement. The *Regular Army Medical Corps* is comparatively very small and of its strength more than half is composed of men who have recently joined its ranks leaving its *experienced* men very widely diffused. In our *own* Camp there were none doing actual examining. The examiners were men of the *Reserve Corps* of only a very few months service in the Army. Their habits of thought and experience were *yours*. At the conclusion of the examination of the first increment of the first draft it appeared that *less than 5 per cent.* of rejections would be found. *Then* it was that realization gradually came to all that the standards for physical requirements for the Army and for civilian occupations were vastly different. When men with weak or defective arches were unable to stand a march of ten miles over country roads; when men with mild organic heart disease became cyanosed during *ordinary* setting up exercises or the more strenuous bayonet exercises; when the restriction of a uni-

form shirt caused extreme *dyspnoea* in a case of moderate or slight goitre in the course of every day military training; when men fell out from the ranks and reported to their *doctors* for these and similar imperfections, *then* the *conviction* was brought home to our doctors that these men, whom they had *accepted*, were being harmed and *not* benefited by their physical training and were a *liability* and not an *asset* to their organizations. And so it came to pass that they began a *weeding out* process among those whom they had previously accepted and became more and more *critical* of the material submitted for examination. Their judgment and action in this matter has been hastened materially by *pressure*, not from the Medical Department, but from the *line* of the Army. The Captain of a company wants no defectives in his ranks who will fall out at a drill or on the march and who lower the *average efficiency* of his organization. The Colonel of the Regiment will not stand idly by and see the training of his regiment delayed and its efficiency *impaired* because of physical deficiencies in his men. And so it has come about quite naturally that the official standard requirements for recruits are substantially the minimum which our Regimental Surgeons would *insist* upon if they had no official guide. As this process in the training of our medical examiners has progressed, so have we found a corresponding, yet slower response, on the part of *local board examiners*. Necessarily is this response slower for it is based upon printed instructions and the return of men from Camp and not upon *practical experience*.

To-morrow, you will have the opportunity of observing the development of physique which has taken place among your townsmen after a few months of military training and *regular living*. We will demonstrate, also, in an imperfect manner, the methods by which we care for our sick in Camp and the provisions made for the rapid evacuation and treatment of our wounded when the time comes to put to a practical use our training in Camp.

Unfortunately, our examinations for the *last draft* are about completed for I would have liked the opportunity of showing you our methods of examining from a *thousand to fourteen hundred* recruits per day. This examination includes not only the routine examination to which each man is subjected, but also the examination by tuberculosis, orthopedic, psychiatrists and psychological specialists which each man undergoes. By the latter, men are

graded according to intelligence and this is a valued aid in the selection of men for non commissioned officers.

I have said that the *first* point of contact between the medical men out of the service and the Army was in the selection of recruits. This, from its nature, is a temporary contact. There is, however, or should be, a permanent contact, indirect perhaps, but of immense possibilities both to the Army and to civil communities. I speak of *sanitation* of communities in general and the control of communicable diseases in those communities in particular. Camp Custer is indeed fortunate to be located in a state which has evidenced in such a high degree through its authorized channels, the State Board of Health, that intelligent spirit of co-operation without which many of our efforts would be nullified and without which Camp Custer would never have taken and maintained its proud position among the most healthful Camps of the National Army.

But it is exactly in the *eradication* of the common communicable diseases, the diseases best known as *children's* diseases, that we come to you for assistance. The best regulations in the world are of no avail unless the individual doctor who sees the case works with *heart* and *brain* not only to cure his patient but to *prevent* the spread of the infection. As your civilian youths are constantly discarding their accustomed clothing and donning the uniform of a soldier, as our soldiers are constantly going back to their former homes, or to the homes of their friends in civil communities, so there is a continuous stream of these infections being brought into our Camp and perhaps a stream carried back to your communities by a reverse current.

Inasmuch as our soldiers are quartered together in buildings which hold about a hundred and fifty men under conditions favoring the spread of such disease from man to man with the greatest ease, the control and elimination of these diseases becomes of magnified importance. As to control, we have been reasonably successful as measured by existing standards, but our goal is elimination and this we will never attain without your active and *unceasing* co-operation.

When we consider that a disease such as mumps, which is everywhere thought of such minor importance that little attention is paid to it, but which spreads with such unfailing rapidity and impartiality under our conditions in Camp as well as in your schools, was re-

sponsible last winter for taking from the ranks in training *upwards* of 270 men per day, then we come to a realization of the fact that we are not dealing with a trivial evil. If instead mumps we consider measles the completed picture may be appalling. We still have among us many mothers who needlessly expose their children to this infection in order that the children contract the disease and get it over with. Gentlemen, for twenty years an epidemic of measles among troops has had more terror for me than any other disease. It was *measles* with its attendant pneumonias and empyemas which caused such an astonishing and alarming death rate in some of our southern Camps as to force a Congressional investigation and serious anxiety in the Surgeon General's office. I am proud to state that we *seem* to have cracked this nut in Camp Custer so that our total cases are limited to a dozen, and for these we are entirely indebted to outside contagion.

I am aware that I am stating nothing new in touching upon these communicable diseases but I believe that in practice their control, or better still, their elimination is not given *sufficient* attention and leaves much to be desired. It is from your communities that fresh sources of infection are brought in continuously into our Camp, swelling our sick rates and diminishing the daily number of men under training and sometimes causing sorrow and mourning in your homes.

Camp Custer represents your state in the great American Army now forming. We have been striving to put it in first place among the National Army Cantonments in regard to its health rates. So far we have not succeeded in reaching higher than second place, although we have hopes. Camp Grant has held first place for many weeks past and we are after her *scalp*. But when it comes to a matter such as this we are discussing we don't lay too much stress on your climate nor on the superior resisting powers of your young men, nor do we believe in *luck*. To attain our goal, to put Camp Custer in first place and keep her there, the active co-operation of the entire state and particularly of its medical men is essential.

To-morrow, we have the honor and pleasure of welcoming you to *your* Camp. We hope that you will be entertained by what you see. But we hope for more than this. We hope that the inspiring sight of 30,000 soldiers training for their fight against the enemy will quicken your pulses, your imagination, your sense of *duty* and that many of you will remain to answer the

call and join our ranks and that those of you who cannot do this will bend their efforts to the solution of the great problem which I have outlined and thus aid in maintaining the physical vigor and well being of our Army and your civil communities.

THE DIFFERENTIAL DIAGNOSIS OF STREPTOCOCCUS, STAPHYLOCOCCUS AND PNEUMOCOCCUS INFECTIONS FROM A CLINICAL STANDPOINT.*

JAMES E. DAVIS, A.M., M.D.

DETROIT, MICH.

The body's obvious changes in power of resistance contribute to or inhibit the invasion of bacteria and likewise virulence and numerical strength of attacking organisms are potent in overcoming resistance.

The bacterial organisms possess tissue selective power or certain tissues offer but a minor resistance to particular organisms as evidenced by pneumococi in relation to the respiratory tract, streptococci to lymphoid tissue and staphylococci to the cutaneous surfaces.

The diffusibility of streptococci is decidedly more marked than is that of staphylococci or pneumococci and localization is much more frequent in the staphylococcic infections.

There are some important outstanding features which must have frequent consideration in the practical problems relating to the infections. This is particularly true of the streptococci which may grow very well on almost any media and at any but extreme temperatures and in any one of many strains. Their mutative possibilities are perhaps many and often very confusing.

The virulence of the streptococcus varies with the strain, location of infection, condition of the tissues, the part of the body infected, and the presence of a symbiotic infection. The reaction usually is very severe and extensive and there is practically no picture of inflammation that cannot arise therefrom. The streptococci are the common cause of inflammatory tissue changes.

The tissue lesion exhibits a death of cells followed by an inflammation which is usually purulent. In contrast with staphylococci the streptococci are more easily eradicated but their presence is not so easily tolerated.

The pneumococcus, like the streptococcus,

grows on nearly any culture medium but its growth is not so extensive. Its selective site is the lung. Its distinctive pathology is essentially the formation of a fibrinous exudate. Wherever the pneumococcus infects the body it is characterized by the formation of fibrin, liquefaction of fibrin, absorption and resolution.

A striking differentiation is seen in the pneumococcic and streptococcic infections of the brain. The meningitis from the pneumococci exhibits a very heavy layer of fibrin over the base of the brain but in streptococcic infections there is a purulent exudate over the meninges.

In man, a large variety of pathological processes may be caused by streptococci depending upon whether the infection is definitely localized or generally distributed and upon the relationship existing between the virulence of the incitant and the resistance of the subject. The hematologic changes in pneumococcic infections may aid in making up the differential picture as in uncomplicated lobar pneumonia when leucocytosis develops early varying from 20,000 to 40,000 and following a true crisis there is a marked diminution. The differential count at this time shows frequently an eosinophilia. A severe infection however may show leucocytosis. There is no change ordinarily in red cells. In streptococcic or staphylococcic infections if severe the red cell count may be reduced to 300,000 in twenty-four hours with little or no change in the white cells. The hemoglobin is also diminished about as much as the red cells. Leucocytosis occurs only when the struggle between the patient and his disease is intense, and is of no prognostic indication.

Leucocytosis may promptly disappear when exudation ceases and suppuration involving mucous surfaces may induce very slight leucocytosis. Puerperal septicemia when either very severe or very mild may have no leucocytosis.

In erysipelas or scarlet fever the leucocyte count may be quite as high as in pneumonia or empyema for leucocytosis after all depends on the resultant of two forces, viz., the severity of the infection and resisting power of the individual.

Lobar pneumonia may show tenacious blood streaked sputum containing densely aggregated Gram positive diplococci, (probably pneumococci).

Evans states that the cytology of the exudate in pneumonia is predominately mononuclear in character.

It has been presumed that streptococcus in-

*Read before the Northern Tri-State Medical Society at LaPorte, Indiana, November 21, 1917.

fections for the most part required some injury of tissue or preceding infection to insure its successful invasion of the body. Its virulence, if the upper air passages, vagina or cervix afforded entrance, was assumed to be very light, (Ziegler).

It seems now well proven that in the great majority of instances lymphoid tissue of the throat is the place of most frequent growth of streptococci and from which general invasion usually proceeds.

The proof of infection may be searched for by the following tests:

1. Cultures of exudates from the joints and tissues about the joints.
2. Cultures from possible foci other than the joints, (as evidenced by clinical manifestations).
3. Blood-cultures for a bacteremia.
4. Blood tests for immune bodies, of which the complement fixation test against autogenous antigens and against exogenous antigens. is the most appropriate. (Hastings).

Foci of infection may be located anywhere in the body. The usual foci however are: alveolar abscess, deep tonsillar or peri-tonsillar abscess and chronic sinusitis. Other but less frequent foci are: cholecystitis, acute or chronic appendicitis, submucous abscess anywhere, salpingitis, vesiculitis seminalis, prostatitis, etc.

Other sources of infection are: secondary foci in lymph-nodes proximal to the primary focus and to systemically infected joints, muscles, etc., "overdentistried" teeth, tonsillotomy stumps.

Histologic examination of joint structures, heart-valves, muscles and other tissues of inoculated animals shows embolic bacterial masses in the terminal arteries. Endothelial proliferation at the site of the embolus closes the vessel lumen. Muscle and joint-capsule show embolism, local hemorrhage and endothelial proliferation closing the lumen of the vessels. The same process takes place locally in the submucosa of the stomach and intestine and of the gall-bladder.

The specific streptococcus may invade vessels of the pancreas with resulting acute severe pancreatitis and glycosuria.

Susceptibility, resistance and immunity are relative terms and are subject to the determining factors from individual, racial or species peculiarities.

Rosenow has reported interesting transmutations of different strains of streptococci and also of streptococcus into pneumococcus and pneumococcus into streptococcus.

The clinical symptoms in the great sore

throat epidemics of this country have been similar. Intense hyperemia with or without a grayish exudate was the usual picture. Enlarged lymph-nodes occur with occasional suppuration. Extreme prostration and a tendency to relapse were emphasized by most observers. (Capps).

In the Boston, Baltimore and Chicago epidemics of streptococcus sore throat there was a striking similarity in the complications. Otitis media, peritonsillar abscess, erysipelas or other forms of skin eruptions and nephritis were common sequelae. Arthritis, endocarditis and myocarditis occurred in many cases. Pleurisy and pneumonia often ushered in a fatal septicemia. But the most dangerous and remarkable complications was peritonitis which was responsible for many deaths.

Cummings reports 7,056 cases of acute rhinitis, pharyngitis, tonsillitis and bronchitis among the students of the University of Michigan during 1913 to 1917. Of 1,342 cases of acute pharyngitis and tonsillitis staphylococci predominated but when 50 per cent. grain alcohol was used to mop off the surface of the tissue affected and the central lesions curetted lightly, 60 per cent. streptococcic cultures were obtained. A fairly constant finding was small lymphoid plaques on the post pharyngeal wall. In the center of the plaques vesicles containing clear, serosanguinous fluid or pus were observed.

PNEUMOCOCCUS.

Pneumococci grow best in neutral or slightly alkaline media. Slight acidity not exceeding 8/10 per cent. does not materially hamper development. When exposed to light they die within one hour. As yet strong soluble poisons have not been obtained from pneumococci, the most potent toxic products being in the nature of endotoxin and closely bound to the cell bodies. It is uncertain whether even a temporary immunity is acquired in pneumococcic infections. Dochez & Avery affirm that pneumonia is rarely an autogenous infection of the lungs.

Morphological variations occur in pneumococci and streptococci so that there are no constant cultural or pathogenic characteristics as yet to distinguish between these organisms. Pneumococci ferment inulin; streptococci do not.

There are some races of pneumococci and streptococci that are indistinguishable.

About 90 per cent. of all cases of lobar pneumonia are caused by the pneumococcus. (Netter). Lobar and other pneumonias are by no

means always caused by one and the same microorganism. Invasion of the respiratory organs by streptococci is not rare, and may lead to bronchitis, pneumonia, empyema or pericarditis. Secondary infections in pulmonary tuberculosis are frequently streptococcic.

Keyes injected an emulsion of pneumococci obtained five days previously from the heart blood of a man who had died of lobar pneumonia into the leg vein of pigeons and found that uniform distribution among the several organs was not obtained, but preferential deposition occurred in the liver and spleen and a much smaller number were found in the lung and bone marrow, and a still smaller number in the pancreas and intestine. In ten minutes after injection pneumococci were localized in the liver and spleen and after seventy-two hours both of these organs were free of the organisms which had been destroyed within fixed phagocytes.

Fraenkel and Reiche have described the changes in the kidneys from acute infectious diseases as transitory in character and due to toxins. The cortex is almost always exclusively affected and only in rare instances were the collecting tubules involved. In the cortex the secreting parenchyma, the loop of Henle, and the straight tubules alone were involved and the glomerular capsules contained variable amounts of exudate.

In twenty-two of the twenty-six cases studied by Mathers pneumococci were found in the kidney. It is entirely probable that the organisms could have been found in every case if the tissues had been examined at an earlier period in the disease. This same worker isolated pneumococci in the urine of 38.4 per cent. of twenty-six cases having lobar pneumonia. The time just before or just after the crisis yielded the organisms best. Pneumococci however do not grow in urine to any great extent, but the urine may be a source of infection. Urinary culture then may be of great value in the diagnosis of pneumococcal infections.

In the so-called la grippe epidemic at the University of Michigan, (1915-1916), the nasal and bronchial mucous membranes were attacked. In 1030 cases the nasal, bronchial and pharyngeal secretions were examined and the predominating organisms were pneumococci and various streptococci, the latter being present in 80 per cent. of the cases. (Cummings).

STAPHYLOCOCCUS.

Sternberg has shown that staphylococci are resistant to heat for ten minutes up to 56 de-

grees and 58 degrees C and when in a completely dried state the resistance reaches 90 degrees or 100 degrees C. The tolerance to dessication is noteworthy, the organisms remaining alive for six to fourteen weeks upon paper or cloth.

Lower animals on the whole are less susceptible to staphylococcus than is man.

A balance of incitant and subject resistance obtains where there is temporary or permanent localization of the infective process. The causative bacteria thereof are pre-eminently the staphylococci.

Virulent staphylococci thrown into the venous blood usually lead to pyemia with secondary abscesses in the kidneys, heart and voluntary muscles.

If injury to bone has preceded intravenous infection by staphylococci, osteomyelitis is often a sequela.

Mechanical or chemical injury of heart valves preceding intravascular staphylococcus inoculation may result in localization leading to malignant endocarditis.

Spontaneous intradermal inoculation with staphylococcus is frequently observed in extending furunculosis.

Certain soluble toxins elaborated by the staphylococci and streptococci attack primarily the red blood corpuscles and hemolytic poisons can be removed from solutions by contact with red blood cells of a susceptible species just as centrifugated brain tissue will remove tetanus toxin.

Lesions following animal injections of staphylococcus are not confined so strikingly to the gall-bladder as in the case of the streptococcus. (Rosenow).

Mixed cultures from appendicitis produced lesions of the appendix in thirty of thirty-seven rabbits, of the stomach or duodenum in nine, and of the gall-bladder in four. Those from ulcer produced lesions of the stomach or duodenum in five of eight animals, of the gall bladder in one and of the appendix in none. (Rosenow).

STREPTOCOCCUS.

Hemolysis is a property common to a number of kinds of streptococci. The nonhemolytic races probably do not produce septic sore throat and are not dangerous to man. (Davis).

The hemolytic property is one characteristic for identification purposes of the human type strains from the many nonhemolytic and feebly hemolytic streptococci found in milk. (Davis).

Streptococcus, has, according to Marmorek,

a direct relationship between its virulence and hemolytic power.

Recovery from streptococcus infection does not to any marked degree produce immunity against these bacteria and organisms long resident in some focus in the body, such as the tonsils, may spontaneously and suddenly invade other tissues and set up new processes, which present clinical pictures entirely different from those produced before; organisms from these new lesions may cause similar lesions in animals.

The usual pathological picture from streptococcal infection is as follows:

Usual primary focus: nose and throat particularly the tonsils.

Distribution: to specifically elected tissues.

Histologic changes: congestion, hemorrhage, infiltration, edema or fluid collection, hemolysis, collection of polymorphonuclear cells about the vessels, cocci agglutination, abscess, hemolysis organization.

Septic sore throat is generally more severe when milk borne than when spread in prosodemic fashion.

Aged persons with septic sore throat emphasize the symptoms of hyperpyrexia, prostration, relapses, rheumatism, erysipelas and nephritis while gland and ear involvement is more common among the young. When spread by contact, multiple cases in a household are less numerous than when it is spread by milk.

In the Westchester County outbreak 83 per cent. of the cases showed reddening of the throat, 60 per cent. tonsillar involvement, 50 per cent. glandular involvements, 47 per cent. prostration, 37 per cent. high temperature, (over 102 degrees), 20 per cent. false membrane, 11 per cent. rheumatism, 9 per cent. quinsy, 8 per cent. ear infection, 7 per cent. relapses, 3 per cent. nephritis, 2 per cent. erysipelas and .04 endocarditis.

The cultures of streptococci from dairy products when injected into animals produce (6%) ulcer of the stomach, (6%) cholecystitis, (28%) arthritis, (6%) endocarditis, (20%) myocarditis and (26%) myositis. (Rosenow and Dunlap).

Henrici has described lesions of the heart, aorta, kidneys and joints in twenty-four animals inoculated with large doses of streptococcus viridans from chronic alveolar abscesses in patients with systemic disease.

The septicemia occurring during the puerperium is most often caused by the streptococcus.

LYMPHADENOID TISSUE.

Streptococcal infection causes swelling, deep congestion and hemorrhage of lymphadenoid tissues. Middle ear, mastoid and sinus involvement followed the initial lesions in lymphoid tissue of vesicles containing serous or hemorrhagic fluid and pustules. (Cummings).

The injected, swollen tonsil and peritonsillar tissue with slight grayish exudate in the crypts or membrane covering the tonsils, pillars and pharyngeal wall gives marked constitutional disturbances and is frequently followed by arthritis, peritonitis and septicemia. (Cummings).

The fused, firm, indurated cervical glands with laryngeal or thyroid complications are streptococcus infections. (Cummings).

Canfield firmly contends that the majority of infectious diseases are contracted through the lymphoid tissues of the throat and nose.

MUSCLE.

Voluntary muscle involvement by streptococci is characterized by two types of lesions, viz., interstitial hemorrhages and scattered isolated necrotic fibers with usually no leucocytic infiltration, (indicating a condition due to circulating toxins rather than to a localization of the streptococci).

Billings says chronic myositis is clinically a specific indication of streptococcal infection and usually there is a selected group of muscles as the biceps humeri, the masseter, the erector spinae, the hamstring, quadriceps femoris and the anterior tibial group. The number of muscles involved in any one patient varies.

Billings has never seen a myositis in gonorrheal arthritis nor has he ever seen tenosynovitis in streptococcus chronic arthritis which is frequently present in gonorrheal arthritis.

JOINTS.

Streptococcal joint lesions may be produced with equal frequency by both hemolytic and nonhemolytic strains. Arthritis is a very frequent lesion from streptococcal organisms and the characteristic pathology shows pronounced congestion of the capsule, with hemorrhages frequently beneath the periosteum. A diagnosis is usually made about the time exudation within the joints occurs. This exudate usually consists of a thick, mucous, turbid fluid, the turbidity being due to polymorphonuclear leucocytes and develops most frequently in the knee joints, next in the elbows, in animal experimental work.

Streptococcal infections of extremities, such as a subungual infection of the finger or toe may give rise to a general invasion of the body with arthritis conforming clinically to a typical attack of acute rheumatic fever.

Billings studied seventy cases of arthritis deformans and found the infectious source is usually focal and located in the mouth, (alveoli), faucial tonsils or antra, (sinuses); occasionally the focus may be the prostate gland, seminal vesicles, female genitalia, appendix, gall bladder or a circumscribed infection anywhere. In all the streptococcus prevailed as the infective organism.

In (14) of (38) cases of arthritis deformans Rosenow found streptococci in the lymph glands draining involved joints.

In Cumming's series of 1600 cases of tonsillitis nephritis was observed in 1.8 per cent. of cases. Transient albuminuria was common. Appendicitis and peritonitis occurred twice, each case being fatal and of streptococcic origin.

HEART AND AORTA.

Streptococci have an elective organ affinity for the heart. Usually endocarditis develops by implantation on the surface of the valve and formation of fibrin exudate with leucocytes and masses of cocci, subendothelial hemorrhages, vegetations and abscesses occur, being developed by embolism.

Myocardial lesions from streptococci show circumscribed submiliary nodules, (Aschoff-Geipel bodies), in the intermuscular septa especially about the vessels. These nodules are composed of large oval or spindle shaped cells arranged about the vessels in rosettes or between muscle fibers in fusiform areas. The nodules may be more frequent near the endocardium especially at the bases of the valves.

The one common feature in streptococcal heart lesions in rabbits is their local nature. These foci are degenerative, exudative changes varying from slight infiltrations to well marked miliary abscesses.

The aorta has been shown by animal experimentation to be a specifically elective tissue in streptococcic infection.

GALL BLADDER.

Streptococci have been isolated from the walls of gall bladders and demonstrated there, in cases of chronic cholecystitis without stones. It would appear, therefore, that for the formation of gallstones two factors are usually necessary: (1) infection furnishing the nucleus

for the precipitation of bile salts, etc., and (2) a concentrated bile of high cholesterol content.

Rosenow found in human cholecystitis streptococci in the fluid content, in the nuclei of gall stones and in the gall bladder walls in more than half of forty-seven cases studied.

Streptococci were found by Rosenow in small numbers either in the stone or in the wall of the gall bladder in four cases in which the mucous membrane of the gall bladder presented the so-called strawberry appearance.

Acute streptococcic infection of the gall bladder produces hemorrhages and marked infiltration chiefly in the submucous and subperitoneal coat while in the chronic stages there is fibrosis and but little cellular infiltration. The streptococci are found in large numbers in the areas of hemorrhage and infiltration.

Elective affinity for the gall bladder was shown by sixteen strains of streptococci from cholecystitis as isolated. Most of these were isolated from the wall of the gall bladder; three from the centers of gallstones, and one from an adjacent lymph gland. (Rosenow).

Lesions following animal injections of staphylococcus are not confined so strikingly to the gall bladder as in the case of the streptococcus. (Rosenow).

The elective localization of the bacteria from the tonsils was tested by Rosenow in the cases of three patients with recurring attacks of cholecystitis. The cultures from two, one during an acute exacerbation, the other three days after cholecystectomy, were injected into two dogs and four rabbits. Both dogs and two of the rabbits developed striking lesions of the gall bladder; the rabbits showing lesions in the muscles in addition; the other two rabbits had ulcer of the stomach. (Rosenow).

APPENDIX.

The occurrence of appendicitis in epidemic form, its seasonal prevalence and its occurrence in several members of the same family have been noted repeatedly, (Mantle, Hood, Martin, Wahle, Haim and Rostonzew).

GOITER.

Rosenow has made cultures from deep tissues of many goiters removed surgically for hyperthyroidism and without exception he has been able to isolate and grow a streptobacillus.

OVARIAN TISSUES.

In fourteen of twenty-five cystic ovaries from patients, Rosenow found streptococci.

INTESTINE AND PERITONEUM.

Steinharter reports that the staphylococcus of proper virulence has an affinity for the intestinal tract, locating most often in the appendix and occasionally in the stomach.

EYE AND NERVOUS SYSTEM.

Panophthalmitis and iridocyclitis are observed after streptococcus and pneumococcus infections.

The clinical picture of streptococcic infection of the nervous system may be best characterized as an inability to keep still, constant movements of the head from side to side, a marked staggering gait with a very apparent inability to coordinate movements. Retraction of the neck may occur. The interpretation may be the so-called "rheumatic chorea."

The pathology of streptococcic infection of the nervous system is shown microscopically by congestion, occasional hemorrhages and cellular infiltration on the brain surface varying from a few lymphocytes to a diffuse thin layer over the entire brain surface of mononuclear and pus cells. Within the brain substance there is perivascular lymphocytic infiltration and minute foci of mononuclear cells not associated with vessels. The cerebellum and pons are affected as well as the cerebrum. The picture is one of encephal meningitis.

Rosenow and Oftedal have shown that streptococci have an elective affinity for the spinal root ganglion and are found in pure culture in the spinal fluid in cases of herpes zoster and are the cause of this disease.

Condat found pneumococcus abscesses in the brain by autopsy following acute meningitis. There were twelve abscesses in the brain and the patient had recently had a pneumonia in the right lung.

Worster-Drought and Kennedy report nine cases of pneumococcal meningitis, five of these cases being the so-called primary form (no active pneumococcal lesion could be found elsewhere). Two adults of this number however had catarrhal colds.

In the (4) cases occurring as secondary infections, two followed lobar pneumonia, one middle ear disease and one empyema of the sphenoidal sinus.

1229 David Whitney Bldg.

THE TECHNIC OF TAKING BLOOD PRESSURE.

WILLIAM R. VIS, B.S., M.D.
DETROIT, MICH.

Technical skill in estimating blood pressure involves a knowledge not only of the technic of the test, but also of the indications for taking a reading. The physician should know in what types of cases a knowledge of blood pressure is valuable, when the test should be made, and how often repeated.

IN WHAT CASES SHOULD BLOOD PRESSURE BE TAKEN?

The importance of knowing the pressure becomes apparent when we view it for the moment from the standpoint of the specialist. We expect the up-to-date surgeon to make pressure readings before, during, and after every major operation. We feel that the obstetrician, the oculist, the neurologist, and the syphilologist can not afford to neglect blood pressure. How much more the internist treating hemorrhage, nephritis, goiter, or adrenal disease! *There is no disease that does not have some effect on blood pressure.* Therefore, every thorough examination should include a blood pressure estimation.

HOW OFTEN SHOULD PRESSURES BE ESTIMATED?

Blood pressure should be taken often enough to determine the mean pressure for the individual under consideration. *Blood pressures vary with every physiological function of the body.* Muscular action (1), digestion, mental exertion (2), excitement, and sleep (3) are potent factors. Less obvious influences are respiration (4), diurnal changes (3), skin reflexes, fatigue, and carbon-dioxide concentration in the blood (5).

Disease phenomena, even more than physiological, modify blood pressure. The readings must be frequent enough to trace the course of the pressure during the disease. Therefore, a single reading may not give the mean pressure, as any one of the many bodily functions may distort the reading, even if no pathological factor is present.

It seems axiomatic to say that more than one pressure estimation should be made. The first reading is recognizedly unreliable because usually the patient reacts to the novelty of the test. Several daily readings are ordinarily indicated. During profound disturbances very frequent readings may be desirable. This has

been found applicable in major surgical operations (6), in labor (7), in the crises of acute infections (8), and in cases of hemorrhage (9).

We should be guided by the nature of each case in judging when pressures should be taken and how often repeated.

METHODS OF ESTIMATING BLOOD PRESSURE.

For the practitioner it is difficult to estimate blood pressure without some form of sphygmomanometer. There are several points in the physical examination which also give some indication of the force of the arterial stream.

Palpation of the radial artery is useful especially if three fingers are employed. The vessel should be compressed by the proximal finger leaving two fingers to differentiate between the tension of the artery and the rigidity of the wall itself. Sclerosis or calcification of a vessel is not proof that high pressure exists. *We have found the ileac much more serviceable than the radial for a palpatory estimate of pressure.*

The heart also offers some aid in detecting high pressure. The left ventricle may be hypertrophied, the apex being displaced downward into the sixth intercostal space and outward beyond the midclavicular line. The powerful character of the apex impulse is suggestive as also a heavy mitral first sound. Enlargement of the ventricle is sometimes difficult of diagnosis but another cardiac sign of equal importance and ready recognition is accentuation of the aortic second sound. In hypertension cases it is often heard in the third right interspace rather than in the second, the heart being pushed down, supposedly, by the sclerosed aortic arch.

However, all of these means of estimating pressure are often inadequate. One of the proofs for this, to my mind, is the fact that the importance of blood pressure remained generally unrecognized until the sphygmomanometer was available. *The practitioner who claims that he can accurately judge the blood pressure by palpation shows by that statement that he does not use an instrument and is not aware of his own limitations.* Anyone who checks up palpatory readings with an instrument soon realizes the inaccuracy of the more primitive method.

THE INSTRUMENT OF CHOICE.

There are three main types of instruments, the oscillometer, the mercury sphygmomanometer, and the aneroid.

For accurate measurements a mercury mano-

meter is preferable to a spring or aneroid. The aneroid is readily portable and for the average physician is the instrument of choice. The oscillometer is too complicated to be of much use in practice.

Aneroids deteriorate, however, and should occasionally be checked with a mercury column. Where a mercury sphygmomanometer is available this is a simple procedure. Attach the aneroid with its pump to the mercury tube leaving out the rubber bags entirely. Then drive the mercury column upward with the pump and compare the readings on the two scales.

The type of rubber bag and cuff is of less importance. The standard bag is about 12 cm. wide and 30 cm. long. The cuff should be firm and large enough to encircle the limb easily.

ADJUSTMENT OF THE INSTRUMENT TO THE LIMB.

Many experiments have shown that it is better not to include clothing within the cuff for accurate measurements of pressure (10). A thin sleeve may be left about the arm to avoid the disturbance that cold would cause in pressure relations. Rolling a thick sleeve up to the shoulder is not satisfactory as it interferes with the application of the cuff and may press upon the vessels, especially the veins. Any interference with the venous return of blood tends to raise the arterial pressure.

One should not place the cuff tightly about the arm. In hypotension the pulse may be obliterated simply by a too tight adjustment of the cuff. This is especially applicable also in children.

It is important to remember that all reflexes alter blood pressure. The rubber bag should not be too cold. Unnecessary roughness should be eliminated and the pain incident to the compression of the limb should be minimized. Gentleness and skill on the part of the physician will tend to allay any apprehension or nervousness on the part of the patient.

SITE OF ESTIMATION OF PRESSURE.

Blood pressure has usually been taken in the arm, with the understanding that there was but little variance throughout the large arterial system. A review of the literature is anything but convincing on this point. Leonard Hill (11) has described a higher femoral pressure in aortic insufficiency and Heitz (12) cites many cases other than aortic where there

is a marked discrepancy in favor of the leg pressure. *In some of our cases the femoral systolic pressure was one hundred millimeters higher than the brachial reading*, with a smaller difference in diastolic pressures. A discrepancy occurred in a great variety of conditions showing that it is not peculiar to aortic regurgitation.

Experimenters have recorded the pressures in the radial and tibial arteries (12). But these probably add little to the sum total of our clinical knowledge of blood pressure.

COMBINED PALPATORY AND AUSCULTATORY METHOD.

The author's technic for arm pressures is as follows:

The instrument is adjusted above the elbow, leaving the hollow of the elbow free for the application of the stethoscope. Before inflating the rubber bag one hand is placed on the radial artery at the wrist and the pulse is felt. With this hand ready to detect pulse changes the rubber bag is inflated until the pulse is no longer felt at the wrist. The mercury will now record a pressure slightly above the systolic pressure, so it should be gradually allowed to fall until the pulse reappears at the wrist. This point marks the palpatory systolic pressure and a reading should be made and mentally noted. The wrist is now released and with the free hand the stethoscope is applied over the bifurcation of the brachial artery. As soon as the sounds are clearly heard the pressure should be raised with the pump until all the sounds are no longer heard. Then the mercury is again allowed to fall gradually. The first sound heard with the stethoscope indicates the auscultatory systolic pressure. As the pressure continues to drop a series of sounds is noted. When the clear sounds give way to a softer sound the diastolic reading should be made. But the faint sounds may continue for a few millimeters or even down to zero.

This method has many advantages. The bag is inflated only just enough to make the readings and the patient is not subjected to a higher pressure on the arm than is necessary. The complete inflation of the bag need be done only once though all the readings are taken twice. The conservation of time is important as any extended manipulation is likely to dis-

tort the blood pressure relations. And, most important, this method gives a comparative record of the palpatory and auscultatory readings.

In the blood pressure estimations in the femoral artery the technic varies somewhat. The bag and cuff are applied so as to compress the vessels under the posteromesial surface of the thigh just above the knee. If the cuff requires additional support a roller bandage may be utilized to hold it firmly in place. The palpatory reading is first made in the popliteal space but it is not always possible to feel the artery or even to detect any pulse. The stethoscope is then applied in the same area for the auscultatory readings. The patient should lie perfectly flat in a comfortable position (13).

THE KOROTKOFF SOUNDS.

A large artery under pressure gives rise to rhythmical sounds synchronous with the pulse beat. This may often be noted when the stethoscope is placed over the subclavian or carotid arteries with slight pressure. When the sphygmomanometer cuff is applied to the limb similar sounds may be elicited. These were well described by Korotkoff and constitute the principal criteria in blood pressure estimation by auscultation.

When the pressure in the cuff is raised so as to exceed the pressure required to close the vessel completely no sound is heard over the vessel distal to the compression. Then by gradually lessening the pressure a series of sounds is produced which is practically uniform in all normal cases.

The first sound is a faint tap which comes and goes with the respiratory waves (4) and with the Traube-Herring vasomotor waves. If the heart beat is irregular in force some beats may cause sound while others are not heard. This sound occurs in the first phase when no blood comes through under the cuff and it is probably due to the dilatation of the upper segment of the compressed vessel (14), which sets the rubber bag into vibration.

In the second phase the blood spurts through with each heart beat as the pressure in the cuff is slightly lowered. The sound heard at the elbow is therefore of a murmurish quality, a thump combined with a murmur.

The third phase is the most important. The

sound is now a sharp thud which increases in loudness and clearness to a maximum and then fades sharply. This transition from loud to soft marks the diastolic pressure.

The fainter sounds constitute the fourth phase. It may include only a few faint sounds which rapidly diminish in intensity until nothing more is heard or it may continue over a longer period which occasionally persists until the mercury drops to zero. The sounds of the fourth phase are also accompanied by a murmur.

The fifth phase offers no sound of any kind. In one sense it is a negative quantity. But in a general sense we include in the fifth phase that part of the process which takes place between the cessation of the sounds and the descent of the mercury to zero. When the fourth phase persists to zero, there is no fifth phase. I have seen such a phenomenon in shock and in anemia, and in the leg it is probably of much more frequent occurrence. The question arises whether the persistence of the sound may not be due to the pressure of the stethoscope of the observer rather than to the pressure of the cuff.

We have, then, five phases, as judged by the Korotkoff sounds. In the first a sharp tap is heard, in the second a murmurish thump, in the third a clear thump which grows progressively louder, and in the fourth the murmur appears again. The murmur in the second phase is explained by the partial collapse of the artery during systole, and the murmur in the fourth phase may result from the partial collapse during diastole. The systolic pressure is read at the first sound and the diastolic where the loud third phase gives way to fainter sounds of the fourth. It has been claimed that the length of the third phase is proportional to the strength of the heart. In exceptional cases the second phase is absent or so faint as to be overlooked (15). This may lead to serious error in estimating the systolic pressure, pulse pressure, and so forth.

CONCLUSION.

There are within reach of every practitioner and clinician the means of estimating the systolic and diastolic blood pressures in the brachial artery. And from these the pulse pressure ratio and heart load may easily be calculated. It behooves us to make use of these means in every case that requires a general examination, in the interest of scientific medicine and in justice to our patients.

Also, as the leg pressures sometimes differ widely from those in the arm, I commend this phase of blood pressure to you for your further consideration.

BIBLIOGRAPHY.

1. Hill, Leonard: The Measurement of Systolic Blood Pressure in Man. *Heart*, 1909-1910, I, p. 73.
2. Heiner, R. G.: Mental and Physical Activity with Reference to Nutrition and Blood Pressure. *Mil. Surg.*, 1917, XL, p. 378.
3. Brooks, H. and Carroll, J. H.: A Clinical Study of the Effects of Sleep and Rest on Blood Pressure. *Arch. Int. Med.*, Aug., 1912, X, p. 97.
4. Foley, F. E. B., Coblentz, R. G., and Snyder, C. D.: On the Determination of the Character and quantity of the Respiratory Change of Arterial Pressure in Man by Means of the Korotkoff Sounds. *Am. Jn. Physiol.*, June, 1916, XL, p. 554.
5. Cathcart, E. P., and Clark, G. H.: The Mode of Action of Carbon Dioxide on the Blood Pressure. *Jn. of Physiol.*, 1914-1915, XLIX, p. 301.
6. Muns, W. E.: Blood Pressure and Graphic Vasomotor Changes in the Periphery During Ether Anesthesia. *Ann. Surg.*, Dec., 1916, LXIV, p. 645.
7. Williams, P. E.: Blood Pressure in Obstetrics. *Med. and Surg.*, April, 1917, I, p. 208.
8. Newburgh, L. H., and Lawrence, C. H.: The Effect of Heat on Blood Pressure. *Arch. Int. Med.*, Feb., 1914, XIII, p. 287.
9. Wiggers, C. J.: The Pathologic Physiology of the Circulation During Hemorrhage. *Arch. Int. Med.*, July, 1914, XIV, p. 33.
10. Rowan, J. J.: The Practical Application of Blood Pressure. *Jn. A.M.A.*, March 18, 1916, LXVI, p. 873.
11. Hill, Leonard and Rowlands, R. A.: Systolic Blood Pressure, (2) In Cases of Aortic Regurgitation. *Heart*, Feb., 1912, III, p. 219.
12. Heitz, J.: Measurement of Pressure in the Arteries of the Lower Members. *Arch. des. mal. du Coeur*, 1913, VI, p. 285.
13. Hill, Leonard: The Influence of the Force of Gravity on the Circulation. *Jn. of Physiol.*, 1895, XVIII, p. 15.
Schraff, R. J.: The Influence of the Force of Gravity upon the Circulation. *Cleveland Med. Jn.*, March, 1917, XVI, p. 170.
14. Erlanger, J.: Study in Blood Pressure Estimation by Indirect Methods. II. The Mechanism of the Compression Sounds of Korotkoff. *Am. Jn. Physiol.*, March, 1916, XL, p. 82.
15. Cook, J. E. and Taussig, A. E.: Auscultatory Blood Pressure Determination. *Jn. A.M.A.*, April 14, 1917, LXVIII, p. 1088.

The Toxicity of Arsphenamin (Salvarsan).—James C. Sargent, Milwaukee, Wis., and J. D. Willis, Roanoke, Va., report untoward effects from the intravenous administration of American-made salvarsan (arsphenamin). Such experiences are not unusual, but should be reported. Untoward results followed the use of the German salvarsan. Such reactions may be due to faulty preparation, to de-

terioration of certain ampules of a batch, to idiosyncrasy of the patient or to faulty technic or preparation or injection. There is no reason to believe that the arsphenamin made in this country is more toxic or less satisfactory than that formerly imported from abroad. (*Jour. A.M.A.*, April 27, 1918, p. 1254).

Minutes of the Fifty-third Annual Meeting of the Michigan State Medical Society at Battle Creek, May 7, 8 and 9, 1918

THE COUNCIL.

The annual meeting of The Council was called to order in the Ordinary of the Post Tavern in Battle Creek at 5:30 P. M., May 7, 1918.

In the absence of the Chairman, W. T. Dodge, who was on duty at Camp Sherman, Chillicothe, O., Vice-Chairman, W. J. Kay, presided. The following were present: Kay, Witter, Church, Buckland, Kiefer, Rockwell, Southworth, Hume, Seeley, President Biddle and the Secretary, F. C. Warnshuis.

The Annual Report of the Council (see minutes of the House of Delegates) was discussed. On motion of Councilor Hume, supported by Councilor Kiefer, the report was approved.

On motion of Councilor Seeley, supported by Councilor Witter, the following resolution was recommended for presentation to the House of Delegates. (See minutes of the House of Delegates).

Moved by Councilor Hume, supported by Councilor Rockwell, that \$100 be appropriated for the expenses of the War Committee. Carried.

A communication from the Council on Education of the A.M.A. requesting the appointment of a State Committee on Hospital Survey was referred to the Chairman for report at the Thursday meeting of the Council.

Councilor Kiefer, supported by Councilor Church, moved that the following men be recommended to the House of Delegates for election to Honorary Membership:

General Buno, Chief Surgeon Royal Italian Armies, Trevisio, Italy.

Col. Guidea Salvi, Udine, Italy.

Major E. Pazzi, Rome, Italy.

Colonel Hugard, Dijon, France.

Carried.

Moved by Councilor Hume, supported by Councilor Buckland that the Patriotic Fund be returned to the County Societies contributing to the fund. Carried.

Moved by Councilor Hume, supported by several, that a telegram of greeting be sent to Chairman Dodge. Carried and the Secretary did send such telegram.

Session adjourned.

SECOND SESSION.

No business having been referred to the Council by the House of Delegates the second session of the Council did not convene.

THIRD SESSION.

The Third Session of the Council was called to order in the Mess Barrack at Camp Custer.

The Secretary introduced the following newly elected Councilors: Jackson, Holdsworth and Toles.

On motion of Councilor DuBois, supported by Councilor Southworth, the Chairman was authorized to appoint a Committee of Three on Hospitals as requested by the Council on Education of the A.M.A. Carried.

On motion of Councilor Southworth, supported by Councilor Church, the officers of the Council and Dr. Reuben Peterson were authorized to determine a plan of activity for the War Committee of the State Society.

The Council tendered a rising vote of thanks to Lt. Col. C. J. Bartlett for the courtesies extended at Camp Custer to the Society.

A vote of thanks and an expression of appreciation was tendered to the retiring Councilors.

On motion of Councilor Southworth, supported by Councilor Seeley, Councilor Kay was elected Chairman of the Council for the ensuing year.

On motion of Councilor Southworth, supported by Councilor Seeley, Councilor W. J. DuBois was elected Vice-Chairman of the Council.

There being no further business the Council adjourned to meet in Detroit in January. The date to be selected by the Chairman.

W. J. KAY, Chairman.

F. C. WARNSHUIS, Secretary.

HOUSE OF DELEGATES.

The House of Delegates of the 53d Annual Meeting of the Michigan State Medical Society was called to order in the Post Tavern, Battle

Creek, at 7:45 P. M., May 7, 1918, with President Biddle presiding.

On roll call it was found that a majority of delegates registered were present and thus a quorum as provided by our By-Laws was present.

The minutes of the last meeting as published in *The Journal* were approved.

ANNUAL REPORT OF THE COUNCIL.

The annual report of the Council was presented by Vice-Chairman Kay, as follows:

In submitting the annual report of its stewardship to the House of Delegates the Council calls attention to the difficulties met with on previous occasions of National stress in maintaining Medical Society Organizations.

The Michigan State Medical Society was organized subsequent to the great Civil War, and a few years ago several of its founders at our anniversary meeting described the lack of organization existing in the Michigan profession at that time.

It has already become apparent that the present World Conflict in which we are engaged may seriously effect our organization. Many of our members have already entered the army, many more will do so, and as the Home Guard becomes smaller it will be more and more difficult to secure regular meetings of our County Societies and of the parent organization. In fact, it was deemed expedient last year to abandon the annual State meeting.

During the winter it became evident to many of us that if we weakly yield to these difficulties our organization may not survive the war. We have come to feel that the war is but an additional reason why those of us at home should keep the fires of scientific interest burning; why we should meet as often as possible for interchange of ideas and for the maintenance of professional co-operation and enthusiasm. In this way we can best do our part in keeping the Michigan Medical profession active and energetic in the performance of its duty to our country.

A reference to our Secretary's report published in the March *Journal* disclosed that so far our membership has not suffered, and our finances have been kept in fine condition. In fact, we have made a net gain in membership in 1917 of eighteen, and a net profit of \$1,969.84.

The Council wishes it understood by the members that our Secretary is entitled to much of the credit for this favorable showing. His untiring energy and ability in securing advertising contracts is responsible for the financial success, and the County secretaries are together deserving of credit for maintaining the membership.

Further reference to the report shows that the cost of publishing our *Journal* has enormously increased during the last five years. In 1912 the *Journal* cost was \$3,821.90. In 1917 it was \$5,756.92. In 1912 the advertising sales were \$1,851.92 and in 1917 they were \$3,742.66. Our net worth has increased from \$4,597.73 in 1912 to \$10,025.00 in 1917.

These figures are eloquent testimonials of the business ability of our Secretary.

PATRIOTIC FUND.

The special meeting of this society in May, 1917, provided for an assessment of five dollars per member to create a patriotic fund to be used in assisting the families who might be in need on account of our members' admission to the Medical Officers' Reserve Corps. The control of the fund was left to the Council, and by the Council to its officers without providing regulations to govern them in its expenditure. Our constituent County Societies responded very reluctantly to the requests for the collection of this fund. A few paid, more gave the request no attention, and there are a few who refused altogether. \$3,155.00 was paid in, of which \$960.00 was from Wayne County. It soon became apparent that the attempt to create this fund as the State Society Enterprise was doomed to meet with defeat. Further consideration led to the conclusion that the special meeting in May, 1917, had been afflicted to some degree with War Hysteria, and with consequent over-anxiety concerning the families of our members who were to enter the Army Medical Service. This conclusion was confirmed when the applications began to come in for the allowances from this fund. The first was from an unmarried member without dependents who desired a donation from the fund for the purpose of paying for Life Insurance. Other applications were of a like nature, and all met with the approval of the officers of their County Societies.

Your officers did not feel like assuming the responsibility of adjusting these claims, consequently the Chairman called a special meeting of the Council in Grand Rapids early in November, 1917. When the Council came together it had become evident that this plan of affording relief did not meet with the approval of our constituent societies. All of the larger societies had provided local funds through comparatively large assessments upon their members to cover this field of endeavor. It was evident that difficult problems were to be solved in disbursing such a fund by a central State Society authority. The Council therefore concluded that the County Societies afforded the proper medium for handling this matter and therefore adopted the following report of the Finance Committee:

"Your committee would recommend that the Patriotic Relief Funds be paid out only on recommendation of the Patriotic Committee of the County Society to which the applicant belongs. Further, that the aggregate of such payments shall not exceed the amount of money already contributed to the State Patriotic Fund by the County Society from which the request emanates."

REMISSION OF DUES.

The Council further considered the subject of remission of dues for our members while in active military service. It was considered desirable that not only the dues but the *Journal* subscriptions as well should be remitted. It was found impracticable for the State Society to remit the *Journal* subscription on account of the postal regulations; only paid subscriptions may be counted as part of the sub-

scription list, and only paid subscribers can receive the *Journal* on second class postal rates. Rebate of subscriptions therefore, would result in the decrease of the size of our subscription list, and consequently a reduction of advertising rates, and would entail prohibitive postage expenditure in sending the *Journal* to members in military service. It was therefore provided that all dues to members in active military service should be remitted, and the several County Societies were asked to pay the *Journal* subscriptions of such members by adoption of the following recommendation of the Finance Committee:

"We further recommend remission of the Defense and Membership dues of each member in active service and that County Societies remit the *Journal* subscription of \$1.50 for each member in active service in order that the *Journal* may be sent to him and so keep that member in touch with the organizational work that is being pursued. It is understood that all members whose dues shall be so remitted shall retain all the privileges and benefits of membership and protection of the Medico-Legal Defense Committee of this Society, and be considered as being members in good standing."

MEDICAL PROTECTIVE INSURANCE.

During the past year various insurance companies have been aggressively active in their solicitation of physicians. Many claims of superiority have been set forth and aspersions have been cast upon competing companies. The Council feels that the excellent work of our Medico-Legal Committee merit our heartiest approval and appreciation and we desire to draw attention to the untiring efforts of the Chairman of our Medico-Legal Committee. We indeed owe him a debt of gratitude.

Your Council feels that our members are entitled to a frank statement revealing the comparative value of the protection afforded by insurance companies.

Your Council also has received inquiries as to the advisability of this Society assuming and providing indemnity protection in addition to defense.

In order that definite information may be secured upon this feature, that we may have a true analysis of the legal coverage conferred in policies sold by insurance companies, and to the end that this question of Medico-Legal protection may be elucidated in the minds of our members, we recommend that the House of Delegates appoint a Committee of five composed of the Chairman of our Medico-Legal committee, Secretary-Editor, and three members of the House of Delegates appointed by the President. This committee to fully investigate the subject of medical insurance in its every phase and report to the Council at its January, 1919, meeting.

DEATH OF COUNCILOR B. H. MCMULLEN.

It is with feelings of sadness that we report the death of one of our pioneer Councilors, B. H. McMullen of the Ninth District, elected in 1902 when the first Board of Councilors was chosen. He has served continually since and for many years past has acted as Chairman of the Finance Committee. His last work for the Society was to participate in the Special Meeting of the Council last November, and to prepare the reports of the Finance Committee referred to in this report, and at that time

he appeared to be in good health and in excellent spirits.

He had a feeling of distress in his jaw and went to the Mayo Clinic where it was diagnosed as cancerous and an operation performed. The diagnosis of cancer not being confirmed, and his strength continuing to fail he went to Minneapolis where a diagnosis of leukemia was made. He failed rapidly and passed away on April first. The funeral was held at Cadillac on April fourth and by the request of President Biddle the State Society was officially represented by the Chairman of the Council.

The burial service were conducted by the Masonic Order with his long time friend and Brother Councilor, Hume, presiding as Past Grand Master.

The State Society has lost a faithful member, one always at the front in any work tending to add to the efficiency and honor of the Medical Profession. His associates in the Council feel that they have not only lost a faithful co-worker but a very dear friend.

Respectfully submitted,

W. T. DODGE, Chairman.

The Council recommends that the following resolution be adopted:

Whereas: There has been transmitted to this Society by our parent organization the A.M.A., the request of the Surgeon-General of the U. S. Army for assistance in securing the necessary medical officers for our military forces and the organizational resources of this Society are thus drafted into the work.

Therefore, we the House of Delegates of the Michigan State Medical Society do hereby

Resolve: That we recognize the responsibility that is thus placed upon us and do hereby pledge and tender to the A.M.A. War Committee and through them to the Surgeon-General our patriotic enlistment in the work and our assurance that we cheerfully accept the duty that has been detailed to us.

Further: That we hereby convey the assurance that this organization will expend its organizational and personal powers and energy to a successful consummation of the work detailed to this Society.

Further: That we assume the obligation of filling such quotas for medical officers as may be allotted to Michigan and will ever stand ready to do our uttermost to maintain the requisite personnel and efficiency of our military forces.

Further: That we hold fast with fervid loyalty and subscribe our all to the one end—the defeat and defacement of our enemies. We recognize that as loyal citizens we cannot do otherwise.

Lastly be it resolved: That we urge our component societies and individual members to give serious thought to the obligation they owe to their country and flag and that they subscribe their devotion by assuming the personal obligation that rests upon them, so that the reputation of the profession of this great state may ever be placed beyond criticism or reproach and its patriotism remain unimpeached.

The Council recommends the election to honorary membership of the men mentioned in the following letter:

U. S. Base Hospital, No. 17, France.
April 6, 1918.

Dr. Andrew P. Biddle, David Whitney Bldg.,
Detroit, Michigan.

Dear Doctor:

In understand that the State Medical Society holds its meeting in Battle Creek on May 7. I think it would be advisable to make the following military surgeons of Italy and France, members of our State Medical Society. These men are all very prominent, and it just so happens that their courtesies were extended to the men of Michigan and Detroit, and I think it would be appropriate to recognize them. Namely:

General Buono, Chief Surgeon, Royal Italian Armies, Treviso, Italy.

Colonel Guidea Salvi, Italian Army, Udine, Italy.

Major E. Pazzi, 2nd Italian Army, Rome, Italy.

Colonel Hugard, Hospital General, Dijon, France.

Capt. James W. Inches has met the Italian Officers personally, as he was a member of the Italian commission.

Colonel Hugard is a surgeon in the French army, and has charge of all the Medical affairs in this sector. He has been extremely courteous to us, and has assisted us greatly in organizing our Sanitary Service here.

Trusting that the Society may see fit to confer this honor upon these men, I am,

Yours truly,

ANGUS McLEAN,

Director, Base Hosp. 17, France.

The following Committees submitted annual reports:

COMMITTEE ON VENEREAL PROPHYLAXIS.

Having taken full cognizance of the increased importance of the venereal question arising out of the state of war, in which we find ourselves, and of the influences of venereal disease on the efficiency of the soldiers, as well as of the more remote effect of dissemination, this committee wishes to express its unqualified approval of the measures taken by the Federal Government, both educational, restrictive, and preventive, as well as a most favorable recognition of the measures taken by the State of Michigan in enforcing the Law requiring the report of all cases of venereal disease, connoting the report of the sources of infection, wherever possible or practicable. In this regard we agree, as has been suggested, that the limitation of the spread of venereal disease would be most materially aided by the assistance of patients with limited means through the medium of free treatment by means of dispensaries and isolation hospitals, and by a general educational campaign enlisting the co-operation of the civil authorities and population.

We respectfully recommend that:

1. Especial emphasis, in the educational side, be laid on the issuance by the State Board of Health of pamphlets to be given to venereal patients;

2. That regulations be made by the State Board of Health in defining, as succinctly as practicable,

the evidence necessary to a diagnosis of gonorrhea or syphilis; what constitutes a cure within the meaning of the regulations of the Board?;

3. A provision of regulations governing a follow-up system, to be compulsory with the physicians to insure the Board that patients remain under treatment until discharged;

4. A plea to the State Legislature for funds in sufficient amount to carry on this work without embarrassment;

5. That official recognition be made by the State Medical Society of the work done by the Federal Government and the State Board of Health;

Lastly, with due regard to all possible arguments pro and con, we appeal to all members of the State Medical Society to assist in every possible way, the work of controlling venereal disease, by reporting all cases.

W. J. WILE,

H. W. FLAGGEMEYER,

ARTHUR E. WEST.

Committee.

COMMITTEE ON LEGISLATION AND PUBLIC POLICY.

Your Committee on Legislation and Public Policy would respectfully report of its activities during the past two years as follows:

During the Legislation session of 1916-17, a determined effort was made to secure certain amendments, or more properly speaking, crippling of, our medical practice laws providing for a State board of drugless healers (so called) and licensing of such practitioners. The Committees on Public Health of Senate and House, in joint session accorded to all concerned a most courteous and patient hearing, at which session your Committee appeared and made argument. We endeavored to show that the educational standards fixed by our present laws were not only conservative, but that any material changes would jeopardize the physical well being of the people. Inasmuch as no further consideration seems to have been given the proposed measures, it is fair to presume that "Safety First" has a strong hold on our intelligent legislators.

Your Committee was informed by the leaders of Chiropractic that the attack will be renewed at each succeeding Legislative session until successful, and already, some enemy periscopes are showing off shore. Michigan has one of the best, and when well administered, one of the fairest and most efficient medical practice laws in the country. If this is to be maintained eternal vigilance must be practiced.

During the past two years your Committee has pursued its former policy of the co-operating with the State Board of Registration in prosecuting and eliminating from the field illegal and incompetent practitioners. Material gains have been made, and though we may not expect complete success in the near future, it is fair to say that the

morale and efficiency standards of the body medical are steadily and surely becoming better.

ARTHUR M. HUME,
HENRY S. BARTHOLOMEW,
BEVERLY D. HARISON.
Committee.

COMMITTEE ON PUBLIC HEALTH.

In compliance with the requirements of the Society we have the honor to herewith present the report of the Committee on Public Health Education, for the period September, 1916, to May, 1918.

Since the last regular meeting of the Society our Country has been forced to declare war against Germany and her allies, and the huge task of creating a large army and a correspondingly adequate medical corps has been undertaken and is rapidly nearing completion. Thousands of medical men from civil life have been commissioned in the Medical Reserve Corps and sent to the various training camps and from there to the scene of conflict. Boards of Health throughout the country have awakened to the necessity of making extraordinary efforts to guard the health of their respective communities and send only clean men to the service. It is safe to say that more publicity has been given to this subject, since the declaration of war than for many years previous, and the people at large undoubtedly are being educated in all public health matters, particularly the prevention of the dangerous communicable diseases, syphilis and gonorrhea. The great "black plague" is being driven from cover into the open where it can easily be bayoneted by the combined civil and military health forces. Nearly every doctor who serves in the U. S. Army and survives will return at the close of the war, to civil life, and it is safe to say, will be a potent factor in the education of the people in all that pertains to the conservation of human life.

The Tuberculosis Survey authorized by the Legislature of 1915, under the provisions of the "Murtha Bill," was terminated July 1, 1917. Much to the regret of all concerned the Legislature of 1917 refused to appropriate further funds for continuance of this very necessary educational campaign. Inasmuch as complete reports of the work done have been printed and furnished the public, no comment is required.

During your chairman's tenure of office as Secretary and Executive Officer of the State Board of Health, February 1914, to April, 1917, every possible means of educating the people in all that pertains to the prevention of disease, was utilized. The Board believing in the value of printer's ink gave the Secretary Carte Blanche, as a result the publications of the Board were enlarged and increased. The Monthly Bulletin "Public Health" grew from a circulation of about 7,500 to nearly 24,000, the pamphlets on the various communicable diseases were revised and increased in numbers, and sent to every school teacher in the State, and by them used in teaching the value of prevention

rather than curing of disease. Lectures with stereoptican and moving picture reels added greatly to the interest and held the audiences, and we believe made the lectures more impressive. The daily bulletins of the A. S. P. H. service are being used by the lay press throughout the state in particular and the country at large, and in various other ways we believe the people are being enlightened and educated up to the fact that life, without health, is hardly worth while.

A notable decrease in infant mortality is constantly advancing and may be brought nearer the goal sought if Legislatures will enact laws and provide for the maintenance of full time adequately compensated health officers in every community. Surely the human population of our State is entitled to as much consideration as our hogs, cattle, fish and game.

Tuberculosis, Pneumonia—The degenerative diseases and violence, exact the greatest death toll, but the so called "harmless diseases of childhood," measles, whooping cough, etc., annually rob the homes of our State of thousands of children. Despite the efforts of the various forces at work to prevent this unwarranted decrease in our ranks, we regret to report that the rural districts show no appreciable progress, nor will any great improvement be noticed until the present method of public health supervision in the rural districts is reconstructed or reformed. Your chairman feels warranted in making the foregoing statement and stands ready to assume the responsibility thereof. Forty years of active practice, in civil, military and public health work under the flags of three different nations and among all classes of people have afforded ample opportunity to form definite opinions.

The Medical Profession of Michigan, always alert, will be more so as the war progresses, and it is hoped, will unite, and form a solid front, which will carry the banner of Public Health Education into hamlet and household. When the masses are aroused they will force Legislators to enact laws which will protect the home and prevent the "Syphilization" of the coming generation, provide ample funds to increase the scope of the State Board of Health and place under its domination all matters pertaining to vital statistics, pure food and drugs. Last, but not least, Michigan should be considered worthy of a State Department of Health presided over by a full time adequately paid Commissioner of Health, clothed with authority and removed from the realm of pernicious politics. In the opinion of your chairman the entire system of Public Health administration and supervision in Michigan should be replaced by the modern and highly efficient plan in vogue in so many sister states. This will be the crowning effort and will repay ten fold all the expense incurred.

In conclusion, your Committee firmly believes that out of this great sacrifice we are offering to bring about future safety for the world at large, will come, increased interest in the conservation

of human life, enlarged views of moral standards, elimination of racial and religious bigotry, recognition of the rights of all the people, facilities for the education of the ignorant and oppressed, and a greater appreciation of the teachings of the Greatest Educator the world has ever known, Jesus of Nazareth.

Michigan, and the State Medical Society, in particular, has good reason to feel proud of her representatives in all arms of the service, the Medical Corps, especially, and we are convinced that when the Medical History of the war is written the Medical Profession of Michigan will occupy a very prominent place in the records and reflect credit on the State.

JOHN L. BURKART,
GUY L. KIEFER,
FRANCES RUTHERFORD,
EDW. GOODWIN,
CARL F. MOLL.

Committee

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION.

Medical education in Michigan, as elsewhere, has felt the influence of the disturbances incident to the mobilization of the country for military purposes. The medical schools of this State have been confronted with trying problems that have seriously threatened the standards of work that have been established in the past. The most urgent of these have arisen through the need of giving to the service of the country many highly trained men from their faculties and yet not impairing the standards of teaching. There is need that the number of students should not be lessened as the situation demands a larger number of medical men than at any other previous time. It is also essential that the organized services of civil hospitals should not be depleted any more than is absolutely unavoidable.

The call of the country has taken many men from the faculties of the two medical schools of the State. This has seriously depleted the teaching force and has thrown heavy burdens on those who with equal patriotism have remained to maintain the organization of the schools.

In the arrangements for selective military service, the government has provided that medical students qualified for military service may enter the enlisted reserve and after graduation automatically pass into active medical service of the army or navy. Should a student drop out of the school, he automatically passes into the regular draft. It is also provided that medical students after graduation may, if they desire, spend one year as interne in an approved hospital. This provision will do much towards maintaining the medical organization of civil hospitals. There is no provision for special consideration of students in pre-medical courses and undoubtedly many who are genuine medical students will be taken into nonspecialized services. In the future, this seems to threaten a lessening of the numbers of medical students.

At the present time, the number of medical students at the University medical school is somewhat increased over that of last year. The total is 330. There are 115 in the first year class and about 65 will graduate this year.

Teaching and research activities of the University medical school have been directed into special lines by the military needs of the times. Special courses of instruction in various aspects of military medicine have been organized and special research investigations under the direction of the War Department are now being carried on in several of the laboratories of the school. The Department of Pathology is offering a course in military pathology. The Psychopathic Hospital, with the assistance of the other departments of the University Hospital, has since last fall been conducting a special course of intensive training for officers of the Medical Reserve who are to be assigned to neuro-psychiatric work.

The Department of Anatomy has been conducting investigation into the problem of peripheral nerve repair. The Department of Physiology has been interested in the problem of fatigue and with the Department of Anatomy has been studying the effects of concussion upon the ear. The Department of Bacteriology has been interested in investigations into the problem of gas gangrene.

The facilities of the University Hospital have been increased during the year by the erection of a building of thirty beds for the Department of Dermatology. Plans for the erection of a new University hospital provided for by the last legislature are now being prepared.

While the more immediate problems that are confronting the medical schools are military in their character, there are others that have arisen that effect intimately the administrative policy of medical schools. The action of certain State boards in fixing standards for those schools whose graduates are to be admitted to their states for practice has introduced much confusion into the requirements for admission to medical schools. The adjustment of the medical course to these is a matter of much concern.

ALLEN M. BARRETT,
BURT R. SHURLEY,
Committee.

REPORT OF COMMITTEE ON TUBERCULOSIS.

Mr. President and Members of the House of Delegates:

Your Committee on Tuberculosis submits the following report: The world war has so engrossed our attention and taken members from our Committee that we have not directly carried out any program during the past year. We are at present at work upon a system of standardization of all matters in connection with the tuberculosis problem which we hope to be able to present to your honorable body at the next annual meeting.

ARTHUR F. FISCHER,
For the Committee.

REPORT OF THE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

The House of Delegates met in Hosak Hall, Academy of Medicine Building, New York City, on June 4, 1917. The meeting was called to order at 10:10 A. M. by its Chairman, Dr. Hubert Work, Pueblo, Col. Michigan's four delegates, Doctors A. J. Lawbaugh, Chas. F. Kuhn, J. D. Brook and Guy L. Connor were present. Dr. Fred. C. Warnshuis was unavoidably detained and his place was filled by his Alternate, Dr. Chas. F. Kuhn.

President Rupert Blue addressed the House of Delegates. His paper dealt with the emergencies affecting the Association due to the war.

The Secretary's report showed that the Fellowship of the American Medical Association has grown from 43,181 (May, 1916) to 44,010 (May, 1917), an increase for the year of 829.

The report of the Board of Trustees showed that there was an increase in Journal subscription receipts during the year of 1916 of nearly \$20,000; that the *Archives of Internal Medicine* was conducted with a loss of only \$66.00 for the year 1916; and that there was a gain of a little over \$322.00 on the *Children's Journal* during that time. The Co-operating Medical Advertising Bureau has done well. It was created to be of assistance to the state society journals and we believe it has proved to be such. The net contribution the Association had to make up for this Bureau for the year 1916 amounted to \$222.96.

The Board of Trustees passed on February, 1917, the following resolution:

"That all the papers read at the annual session be treated as volunteer papers and that same be published in full in the *Journal* or rejected, or published in abstract, as may seem best."

This action was taken because for many reasons it seems impracticable to publish all papers read in various section in full. Later on the Association may publish two additional journals, one devoted to ophthalmology and one to laryngology and otology.

The Treasurer's report shows the resources of the Association in a satisfactory condition notwithstanding the expense of a long and hard case of litigation in which the Association was the defendant.

The reports of the various committees can be read in detail in the *Journal of the American Medical Association*.

The following officers were elected for the coming year:

President—Arthur Dean Bevan, Chicago.
 First Vice-Pres.—Edward H. Bradford, Boston.
 Second Vice-Pres.—John McMullen, U. S. F. H. S.
 Third Vice-Pres.—Lawrence Litchfield, Pittsburgh
 Fourth Vice-Pres.—Holman Taylor, Fort Worth.
 Secretary—Alexander R. Craig, Chicago.
 Treasurer—William Allen Pusey, Chicago.
 Chairman of House of Delegates—Hubert Work, Pueblo.

Vice-Chairman of House of Delegates—Dwight H. Murray, Syracuse.

Members of Board of Trustees—Philip Marvel, Atlantic City; W. T. Sarles, Sparta, Wis.; H. Bert Ellis, Los Angeles; Wendell C. Phillips, Boston.

Chicago was selected as the place for the next meeting. The time of the meeting was left to the Board of Trustees.

GUY L. CONNOR, Delegate.

These reports were all referred to the Business Committee.

The following nominations were made for the personnel of the Nominating Committee:

Richard Burke, Detroit, 12th District.
 J. J. Mersen, Holland, 5th District.
 G. A. Seybold, Jackson, 2d District.
 Guy M. Johnson, Traverse City, 9th District.
 J. G. Nicholson, Hart, 11th District.
 W. J. Wilson, Detroit, 1st District.
 J. D. Brook, Grandville, 5th District.
 W. E. Ward, Owosso, 6th District.

On motion of Dr. Aaron, supported by several, the nominations were closed.

The President appointed Drs. Andries, Wilson and Wolfson as tellers.

On spreading the ballot the tellers reported the election of the following Nominating Committee:

Johnson, 9th District.
 Seybold, 2d District.
 Wilson, 1st District.
 Burke, 12th District.
 Brook, 5th District.

The President declared their election.

The President appointed the following Business Committee:

Brook, Wayne.
 Grosjean, Bay City.
 Dodge, Hancock.
 Miller, Cadillac.
 Godfrey, Calhoun.

Dr. C. B. Gardner of Mt. Pleasant introduced the following resolution which was referred to the Business Committee:

The *Journal* should not be sent to any members in arrears and the three months of grace now allowed be discontinued and annulled.

There being no further business the first session was adjourned.

SECOND SESSION.

The second session of the House of Delegates was called to order by President Biddle in the Masonic Temple, Battle Creek, May 8, at 8:00 A. M., with a majority of the delegates present.

The Business Committee through its Chairman, C. D. Brooks, submitted the following report:

1. The Committee recommends that the *Journal of the Michigan State Medical Society* be discontinued to members in arrears.

2. We recommend the adoption of the recommendation presented by the Council regarding the enlisted members in the Medical Reserve.

3. Recommend that the following distinguished Medical Officers serving in the Italian and French armies be made honorary members of the Michigan State Medical Society:

General Buono, Chief Surgeon Royal Italian Armies.

Col. Gudae Salvi, Italian Army.

Major E. Pazzi, Second Italian Army.

Col. Hugard, Hospital General, Dijon, France.

4. That the Secretaries of the County Societies be instructed to send to the Secretary of the State Society, a list of the delegates of their respective counties according to the constitution of this society.

5. The Committee endorses most heartily the recommendation of the Council regarding the business efficiency of the Secretary-Editor of the Society.

6. We endorse the report of the Council regarding the disposition of the "patriotic fund" and urge its adoption.

7. We recommend the adoption of the resolution concerning the remission of dues to those in active service.

8. Recommend the appointment of a Committee to investigate Medical Protection Insurance, as outlined by the Council.

9. We heartily endorse the resolution of respect to Dr. B. H. McMullen, and recommend that it be embodied in the *Journal*, with the minutes of this meeting.

10. The Committee strongly concurs in the request of the surgeon general regarding Michigan's quota for the Medical Reserve Corps and recommends that immediate steps be taken by this Society in accordance therewith.

All of which is respectfully submitted.

W. L. GODFREY,

G. D. MILLER,

W. H. DODGE,

C. D. BROOKS, Chr.

Chairman Brooks of Wayne moved the adoption of the report and its inherent recommendations. Supported by several and carried.

Chairman J. D. Brook of Kent presented the following report of the Nominating Committee:

OFFICERS.

1st Vice-Pres.—W. S. Shipp, Battle Creek.

2d Vice-Pres.—C. E. Miller, Cadillac.

3d Vice-Pres.—J. C. Chester, Emmett.

4th Vice-Pres.—F. W. Garber, Muskegon.

DELEGATES TO A. M. A.

Guy L. Connor, Detroit.

A. W. Hornbogen, Marquette.

J. D. Brook, Grand Rapids.

ALTERNATES.

Philip D. Bourland.

W. J. Wilson.

COUNCILORS.

2d Dist.—E. W. Toles, Lansing.

4th Dist.—Bert Jackson, Kalamazoo.

5th Dist.—W. J. DuBois, Grand Rapids.

7th Dist.—W. J. Kay, Lapeer.

8th Dist.—A. L. Seeley, Mayville.

9th Dist.—F. Holdsworth, Traverse City.

10th Dist.—J. M. McClurg, Bay City.

12th Dist.—R. S. Buckland, Baraga.

14th Dist.—C. T. Southworth, Monroe.

1919 Meeting Place—Detroit.

Moved by Chairman Brook, supported by several, that the report be adopted.

Moved by Dr. Simpson, supported by several, that the Secretary cast the vote of the House for the several nominees.

The Secretary did so cast and the President declared the nominees elected.

The following communication was received and presented to the House by the Nominating Committee:

May 7, 1918.

To the House of Delegates, Michigan State Medical Society:

Gentlemen:

I would respectfully tender my resignation as Councilor of the Sixth District of the Michigan State Medical Society. Same to be effective from this date.

I remain, very truly and fraternally yours,

ARTHUR M. HUME.

Moved by Brooks of Wayne, supported by Godfrey of Calhoun, that the resignation be accepted. Carried.

Moved by Wilson of Wayne, supported by Godfrey of Calhoun, that the men recommended for honorary membership be so elected. Carried and the President declared their election.

There being no further business the President declared the House adjourned. *Sine die*.

A. P. BIDDLE, President.

F. C. WARNSHUIS, Secretary.

GENERAL SESSIONS.

FIRST SESSION.

Battle Creek, Mich., May 8, 1918, Masonic Temple.

Meeting called to order at 9:45 by the President, Dr. A. P. Biddle.

Invocation by Rev. Chapman, Battle Creek.

The President: In calling together the Fifty-third Annual Meeting of the State Medical Society, I want to say that we are gathered here chiefly to give expression to the loyalty that we owe to the Government and to the patriotism which we feel for it. (Applause). I ask every one of you to take this meeting in the spirit in which it is held. Back of the men who are leading out is the medical profession, and back of all is the sinews of war. So we have called upon Mr. Smith, of the Old National Bank for a word of welcome.

Mr. W. J. Smith then addressed the Convention as follows:

Mr. President and Members of the Michigan State Medical Society:

It is a great privilege and appreciated pleasure that I am asked to express by your Local Committee when I acknowledge the honor your presence confers upon the City of Battle Creek. It is quite fair to say in all humility of spirit that I can understand the courtesy extended to me only for one reason and that is that the common and accepted frailties of a banker always require the most experienced and scientific treatment. No one expects very much from a banker so no further apology is necessary.

I am sure you have all read the old story of the aged couple wandering through the English Churchyard when the wife called to her husband a short distance away and said, "Come back, John, here are two men buried in the same grave. Read, Here lies a banker and an honest man."

My friends, we are glad to greet you. We only regret that the hospitality of our hearts and homes cannot measure the service you have rendered to humanity. In common with every other citizen I feel the debt of gratitude that has no maturity and can never be paid with any words of praise.

A touch of memory brings a backward glance through the sunny vales of early childhood. I see the old farm home and hear the click of the front gate. The Village Doctor is coming down the winding foot-path. We had watched for him all through that long sultry August afternoon but just at night-fall the benefactor came. His re-assuring word and kindly smile relieved the childish fear. All through the long stretches of the night, when life and resistance seemed at lowest ebb, he stood silent guard, death could not enter and life remained. And in a few succeeding days I knew once more the devotion, the tenderness and cheer of a mother's love, and on down through the eventful years until at the age of eighty her sweet and beautiful spirit passed on to realms eternal.

Recollections of that character have been a treasure of the millions. It is the message that has come down to us through the music of the years and in response to the great call of duty and of service

we have ever heard your answer, "He profits most who serves best."

To my mind, and I think it is admitted by all, the opportunities for your great work reveal a deeper insight into the real vital strength of character than any other field of activity. It is true the banker, the manufacturer, the lawyer and the merchant touch many phases of human life, but their dealings with men of affairs are always surrounded with the influence of mental and physical vigor when their faculties can be applied to the highest point of efficiency, but you observe this view. You see them in that other hour when achievement no longer beckons and the applause of success no longer thrills. That is the final test. That is when the weak and the faint hearted fall by the wayside, and you see the strong character overcome all obstacles, even despair itself, and bring to light the hidden jewels of the human soul.

We congratulate you for your splendid record of consecration, for the example that lifts human effort from the marshes to the heights. You have enriched the treasury of mankind and have led the way for that new manhood and new womanhood now unfolding to bless and adorn the earth. That is why we are proud that you have paid us the compliment to assemble here in this little city we call home.

I am not unmindful of the fact that above and beyond anything I have mentioned the one event that is nearest and dearest to your hearts will be the visit to Camp Custer. Tomorrow you will forget Battle Creek, you will forget the stately mansions and all the fascinations of architectural beauty that you have ever known. You will only be thinking of those soldier barracks, comfortable yet crude and simple in construction, because they shelter hearts as brave and hopes as exalted as ever existed beneath the sweep of the almighty stars. You will find there the culture of the university, the representatives from the marts of trade and commerce, the sturdy sons of toil from field forest and mine. All that education, science, culture and art has been able to accomplish in all the ages past has fought its fruitage in a manhood that will shed imperishable glory upon Wisconsin and Michigan, those proud sister states of the inland seas.

Think of it, those young men in the springtime of their careers, in that period of life when nature calls with a thousand voices to the feast of gladness and opportunity, with the horizon of ambition filled with brightest hope, at a time when love of home and friends and dear ones is most alluring in its charm, those brave fellows do not complain, retreat or hesitate. They bid farewell to everything nearest and dearest on this earth and say, "I am here to defend my country and my flag, on any field of death to save the cause of liberty and vindicate the nation's honor."

They know that every hillside and plain in northern France is one vast scene of weariness, loneliness, hardship and suffering and the messenger of danger rides on every wind that blows, but they do not falter. They have learned the cheer of bravery, the smile of sacrifice and courage of their faith. The great drive is on and they are anxious to be there. They have been trained and they are going. They are hurrying by every road and from

every Camp to France. Every transport that floats the seas is bearing them across with silence and swiftness to the scenes of that awful conflict, but they are not alone. Many of your friends and thousands in your great profession have gone before.

We know that Doctors and nurses are exposed day and night to the enemy's bombs with no protection except the frail roof of the hospital. There is little rest from them as long as the battle rages and the wounded come in steady streams to be comforted, mended and cured.

We are sending the Doctors every day to face this life. Some of them here today are going soon. They will not come back until the fight is over for they cannot be spared. Many of them will never come back to rest from their labors, but will pass into that deeper rest that knows no waking. They will become a part of that dearer dust of America that will mingle with the soil of France. Some writer has said that in the heart of patriotism would come a new flower never seen before by the eyes of men. "It will bloom there after the war is over, a fair white blossom beside the golden lillies of France and it will be known as the Liberty flower, a white emblem of purity, love and universal peace," purchased by the red blood of heroes on a thousand fields of glory.

Men of Michigan, members of a high and holy calling, assembled at a time when the greatest drama in the world's history is being enacted in the theatre of war; at the new dawn, whether it be near or far it will herald a day resplendent in the white light of victory, when the records of your sacrifice and work will read invaluable and immortal service for the great American Republic. Again we bid you welcome to the hospitality of all we have and all we love in the City of Battle Creek.

President: We feel certain that we are welcome to the City of Battle Creek, and now to make it still more so Dr. Stewart, in behalf of the Calhoun County Medical Association will express the sentiment of that Organization:

Fellow Members of the State Medical Society:

I have the honor at this time to extend to you on account of the Calhoun County Medical Society a very hearty welcome. I assure you that we very greatly appreciate your presence here, and I am reminded that this is your second visit to our city within the past year. During this period there has sprung up in our midst Camp Custer with a population almost equal to that of Battle Creek; and tomorrow you will have an opportunity of going out there and seeing the work these young men are doing. There is assembled in that Camp the very pick of intelligence, skill and ability of the young manhood of Michigan and Wisconsin. Battle Creek has given these men a most cordial and hearty greeting—the churches, the various fraternal and other organizations and the private homes are all doing their utmost for them, and we are all proud to have them mingle with our citizens.

Mr. Smith alluded to the large number of threshing machines made here—but I want to say that out at Camp Custer we have a bigger and better threshing machine than we have in Battle Creek,

and when we go out there and see these men, you will agree with me. And every one of these men are filled with the idea that when they are once on the field they will do their part to drive the Kaiser and his associates into Northern Siberia, more in keeping with his withered and frigid soul. (Applause).

President: In behalf of the State Medical Society I desire to say that we accept your hospitality, and sincerely thank you for your cordial and hearty welcome to your city and your people.

President's Address. (See Original Articles this issue).

Dr. Biddle delivered his Annual Presidential address.

Nominations for President.

Dr. C. B. Burr, of Flint: One year ago there was a meeting of this Society held in this city. It had but one object in view—consultation as to the means which we might employ to further the aims of the Government toward the winning of the war against the forces of Hell. And that participation has been given to us, even to a greater extent than we anticipated. We now have an organized profession in the State to co-operate with the aims and efforts of the Government and loyal, earnest co-operation will certainly come from this Society.

Events are now happening that are enormous, tremendous—I should call them colossal except for the fact that "colossal" is such a favorite word in the vocabulary of the Kaiser, we are dispensing with words thus employed about as rapidly as we can. But there is one word that we must preserve for the present, at least—we must give the best expression in our power to hold up the hands of our valued allies—the sturdy Belgian, the self-sacrificing Serbians, the courageous British, the brave French, the valorous Italians—in their struggle to write in letters of red on the banner furled to all the world that Might does not make Right—that Autocracy is doomed and that there must emerge from this conflict a Democracy for all the world.

This is a day of big guns—shooting popguns is out of the game. This is a day for war horses—ponies are no more available. Neither are wild asses from the prairies of Nebraska where their braying has ceased.

This is a day of tanks, of a certain kind. In this Society we need, particularly at this crisis, as presiding officer a big, red-blooded, loyal man—and such we have—and we have many more such available—but the one I wish to name is thoroughly well known to every member of the Medical profession in this State. He has had military experience; he is a forceful speaker, a versatile writer, has been long identified with this Society, a real war-horse in it—a really big gun—he is a tank of a certain kind, a tank filled with medical wisdom, a tank full of benevolence and the milk of human kindness, charity—those things so desirable in the character of a well-ordered medical man—I take great pleasure in nominating, Mr. President and Fellow

Members of this Society, for the high office of President of the Michigan State Medical Association, Arthur M. Hume, of Owosso. (Great applause).

Dr. Stockwell: As a representative of the Medical profession of Port Huron I most heartily support the nomination of our friend of Western-Central Michigan.

There were no other nominations.

SERGEANT ATHERTON.

At this point Sergeant Joe Atherton, was presented as a soldier fresh from the trenches, and he was received with pronounced demonstration. He spoke for nearly half an hour, giving a most graphic description of the war, and what is involved—what America may look for—real self-sacrifice in putting in the field at least five million men, and giving of our substance till it hurts, to support these men while they are fighting to win the war for Democracy.

Adjourned.

SECOND SESSION.

The Second Session of the General Session was held in front of the 310th Sanitary Train Headquarters in Camp Custer and called to order by President Biddle.

The following resolution was presented by C. B. Burr of Flint:

Resolved: That the Michigan Medical Profession is heartily in sympathy with, and thoroughly determined to assume its part in carrying into effect, the wise and timely declaration of the President to employ force to the limit in waging war to a victorious conclusion against the enemies of democracy led and controlled by the Prussian Kaiser.

Resolved: That medical forces must be employed to the extent of extreme sacrifice to win the war and that the thorough co-operation of the Michigan Medical Profession is freely offered to all the Departments of the Government.

Resolved: That to the end of augmenting its effectiveness there is necessary, legislation conferring rank and additional authority upon Medical Officers commensurate with their responsibilities as imposed by Congress, and corresponding in a measure with the Medical Organization in the armies of the allies of the United States. Such legislation is contemplated by the Owen and Dyer bills.

Resolved: That the Michigan State Medical Society endorses these bills and urges their speedy enactment into law.

Resolved: That copies of these resolutions be forwarded to the President, the Secretaries of the War and Navy, the Military Affairs Committee of both Houses of Congress, the Surgeon Generals of the Army, Navy and Public Health service, the Council of National Defense and the Senators and Representatives from Michigan.

On motion of several the resolution was adopted.

Chairman Brook of the Nominating Committee reported 716 votes cast for Arthur M. Hume of Owosso for President. President Biddle introduced the newly elected President who in a fitting manner expressed his appreciation and commented upon the obligation that rested upon each member in this world's war.

Dr. Biddle moved and was supported by several that the hearty thanks of the Society be extended the Calhoun County Society, the Commander and Medical Officers of Camp Custer for the provisions perfected and courtesies extended the members in attendance at this session. Carried.

Dr. Roller of Kent moved that the thanks of the Society be extended to Dr. Biddle for the services rendered our Society during his term of office. Carried.

There being no further business President Hume declared the meeting adjourned *sine dei*.

F. C. WARNSHUIS, Secretary.

ANNUAL MEETING NOTES.

The following telegram was received:

Base Hospital, Camp Sherman, May 7, 1918.
Secretary of M. S. M. S.

Post Tavern. Battle Creek.

I trust that your meeting will prove profitable and inspiring to the members and the people of Michigan. Convey my greetings and regrets that I cannot be with you.

W. T. DODGE.

Dr. J. C. Bloodgood of Baltimore was unable to be present on account of sudden illness and high fever.

All sessions convened promptly and conducted their business with promptness and dispatch. There was no dragging or tedious waste of time. Everything was infused with snap and "pep."

Seven Hundred and Sixteen members registered. There were fully one hundred members who arrived on Wednesday evening and Thursday morning. The total number present easily reached 825. It certainly was a wonderful meeting.

The Secretary estimated an attendance of 400. Some member stated in March that he was too optimistic and prophesied an attendance of 250. We were pleasantly surprised with an 800 mark.

Through the courtesy of Camp Officers mess was provided for 400 members. We were indeed sorry we could not issue more tickets to mess but it will be readily perceived we could not impose further on the preparations made by our hosts.

Those who attended the Patriotic Meeting, (the Theatre was filled) were inspired by the addresses of Capt. J. W. Inches and Rev. A. W. Wishart.

The Camp Custer Band and 200 soldiers singing Camp Songs was a pleasant feature of the meeting.

Drs. Stewart, Kingsley, Colver, Allen, Stone, Godfrey of Battle Creek were on the job every minute.

Many of the members missed the setting up of

the Field Hospital under the direction of Lt. Col. Bremerman. It was an inspiring sight for in 45 minutes 9 tents were erected and every thing ready to receive and give the necessary dressings or perform such operations as might be required by 250 wounded.

Never again will our Society witness such an inspiring spectacle as the Division Review. We are more firm in the belief that "We're Going Over," and that it will be all over when those boys get over there.

PROPAGANDA FOR REFORM.

Some Nostrums.—Continuing its policy of giving the public the fact in regard to worthless, injurious or misleadingly advertised nostrums, the Louisiana State Board of Health has analyzed the following "patent medicines:" Dermillo, a skin and complexion nostrum composed of zinc oxid, calcium carbonate, starch and salicylic acid in water, colored and perfumed. Wendell's Ambition Pills, a "great nerve tonic," containing strychnin, ferric oxid, pepper, cinnamon and ginger, and probably a little aloes. Orchard White, a toilet preparation to be mixed with lemon juice, reported to be a mucilage containing bismuth citrate, boric acid, alcohol and gum tragacanth. Exelento Quinine Pomade, a hair preparation found to consist chiefly of petrolatum, some liquid petrolatum, a trace of oil of gaultheria, sulphur, and among other things, a trace of quinin. Sloan's Liniment, which appeared to be composed essentially of oil of turpentine, oil of camphor, oil of sassafras and capsicum. Vick's Vap-O-Rub, which appeared to be a mixture of petrolatum with camphor, menthol and oil of thyme, eucalyptus and turpentine. La Creole Hair Dressing, a perfumed solution containing lead acetate, sulphur and glycerin, alcohol and water. Prescription A 2851 for Rheumatism, formerly said to have been known as Eimer and Amend's Rheumatic Remedy, which appeared to be a sherry wine containing 7.5 per cent. potassium iodid. (*Jour. A.M.A.*, April 6, 1918, p. 1024).

Gua'iodine.—Examination of Guaiodine, a preparation of the Intravenous Products Co., Denver, in the A.M.A. Chemical Laboratory shows that, instead of containing free "colloidal" iodine as claimed, the preparation is essentially an iodated fatty oil, containing only combined iodine. The referee of the Committee on Pharmacology reported to the Council on Pharmacy and Chemistry that equally misleading, in view of the Laboratory's findings, are the implied claims that the antiseptic action of Guaiodine corresponds to that of free iodine. Guaiodine is advertised chiefly for the treatment of gonorrhea by means of obviously false claims. The Council declared Guaiodine inadmissible to New and Nonofficial Remedies because of false statements as to composition and action. (*Jour. A.M.A.*, April 6, 1918, p. 1026).

Neoarsphenamine.—The Federal Trade Commission has granted an importing license to the Diarsenol Company, Inc., 475 Ellicott Square, Buffalo, for neodiarsenol, the Canadian brand of neoarsphe-

namine. Licenses to manufacture neoarsphenamine have also been issued to The Takamine Laboratories, New York, to the Farbwerke-Hoechst Co., New York, and to the Dermatological Research Laboratories, Philadelphia. The safest and most effective products, provided one has mastered the technic, are the arsphenamines—not the neoarsphenamines. (*Jour. A.M.A.*, April 6, 1918, p. 1027).

America-Made Acetylsalicylic Acid.—At the request of the Council on Pharmacy and Chemistry an examination of the market supply of American-Made acetylsalicylic acid has been made in the A.M.A. Chemical Laboratory by P. N. Leech. The investigation shows that there are on the American market, made by American firms, several brands of acetylsalicylic acid that are just as good as, if not better than, the widely advertised Aspirin-Bayer. About a year ago the Council on Pharmacy and Chemistry deleted Aspirin-Bayer from New and Nonofficial Remedies. Since the Bayer aspirin patent expired in February, 1917, thereby making it possible for manufacturers legally to produce and sell acetylsalicylic acid in the United States, the Council established standards for the quality of this unofficial drug. As a result, the following products have been found to meet these requirements and are included in New and Nonofficial Remedies: Aspirin-L. and F., Acetylsalicylic Acid-Squibb, Acetylsalicylic Acid-Merck, Acetylsalicylic Acid-Milliken, Acetylsalicylic Acid-M. C. W., Acetylsalicylic Acid-Monsanto and Acetylsalicylic Acid-P. W. R. (*Jour. A.M.A.*, April 13, 1918, p. 1097).

Unduly Toxic Arsphenamin.—In view of the reports in current medical literature of untoward results from the use of arsphenamin and neoarsphenamin, Dr. G. W. McCoy, Director of the U. S. Hygienic Laboratory, Washington, D. C., requests that samples of any lot of these arsenicals which have shown undue toxicity be forwarded to the Hygienic Laboratory for examination. (*Jour. A.M.A.*, April 13, 1918, p. 1110).

Antipneumococcus Vaccine.—The work by Lister in the diamond mines of Kimberley, South Africa, gives promise of a successful method of inoculation against lobar pneumonia. Lister finds that the pneumonia prevalent among the workers in the diamond mines is due mainly to three groups of pneumococci, and that inoculation with a vaccine made from the three groups prevents the occurrence of pneumonia as caused by members of these groups. (*Jour. A.M.A.*, April 20, 1918, p. 1163).

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Arthur M. Hume, Chairman.....Owosso
 Guy L. KleferDetroit
 W. J. Kay.....Lapeer
 W. J. DuBois.....Grand Rapids

EDITOR

FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
 Grand Rapids, Mich.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

June

Editorials

THE FIFTY-THIRD ANNUAL MEETING

Elsewhere in this issue will be found a complete report of the activities of our 53d annual meeting. To those who were present no editorial references of ours will enhance or amplify the personal impressions gained during that session. Mere citation of the facts will not record the inspiration that was imparted.

The Patriotic Meeting on Wednesday evening was what the name implied. The address of General Kennedy, Commander of Camp Custer, and of Lt. Col. Bartlett, Division Surgeon, inspired our confidences and gave testimony as to why Camp Custer stands first among the Cantonments. We know our boys will be safe under their military direction. We are indeed grateful for the many courtesies shown our Society and privileges afforded us during the day at the Camp.

The address of Rev. A. W. Wishart was indeed a patriotic appeal to every loyal citizen. His effort merited the rising of the audience to its feet and the prolonged applause that greeted his conclusion was ample testimony of appreciation. The address, pictures and description presented by Dr. J. W. Inches of his trip to the Italian front gave all a new insight as to the part our Italian allies are assuming in the war. Our only regret was that further time was not available for the exhibition of more

pictures. Dr. Inches description was most interesting, inspiring and imparted a distinct stimulation.

The Section work was characterized by very excellent papers that elicited large attendances. All the section officers merit our thanks for their work in preparing their excellent programs.

The House of Delegates performed its work expeditiously and under the military presiding of President Biddle there was no opportunity for unparliamentary procedure. The Councilors, Delegates and officers elected apparently received the approval of all. The report of the several committees and of the Council reveal the organizations activity during the past year.

There was no contest for the office of President. The unanimous election of Arthur M. Hume of Owosso was a timely recognition of the interest in and the effort expended by him in behalf of the profession of the state.

The Day at Camp Custer exceeded our expectation. The morning Sick Call, the "walks" through the Base Hospital and inspection of barracks and the noon Mess gave all a new insight in Camp life and the efficient military training given to our recruits. The demonstration of setting up a Field Hospital was splendid and revealed the thorough training of the Sanitary Train under Lt. Col. Bremmerman. It took just 45 minutes to set up the hospital and the first case received was on the operating table and everything ready for operation in that short time.

The Division Review is beyond our description. The thousands of troops drawn up in mass formation on that field with the background of freshly leaved trees, the precision of formation, the promptness of all in their readiness when the bugle blew at 1:30 to commence their march was a most wonderful and inspiring spectacle. It was the second review since the establishment of the Camp and our debt is indeed great to General Kennedy for arranging this review for our benefit.

The attendance was beyond all expectation. Seven hundred and sixteen members registered and fully one hundred arrived on Thursday morning. It would be a reasonable estimate to state that 825 members attended.

The meeting is now recorded in our records. Its accruing benefits will exercise a constant influence upon our members. Far into the evening of our lives will we recall our 53d Annual meeting at Camp Custer and Battle Creek.

THE DRIVE FOR DOCTORS.

In response to the direct appeal to the American Medical Association and its constituent units, the State and County societies by the Surgeon-General our Society has perfected a state organization for thorough work. The Surgeon-General has expressed the opinion that the work of supplying medical officers can be best accomplished by working through organized channels. To that end will our Society's effort be devoted.

Michigan may well be proud of the showing made by her doctors during the past year in supplying medical officers for our military forces. Credit for this showing accrued from the patriotism of the profession and the untiring efforts of Dr. Reuben Peterson.

To no other single person is so much credit due as to Dr. Peterson. He has covered practically every county of the state, delivered numerous addresses before gatherings of county societies and public meetings, he has been the personal advisor of many of our members in determining whether their duty consisted of remaining at home or of applying for a commission and he has written hundreds of letters answering all manner of inquiries as to the Reserve Corps. He has sacrificed personal interests to this task and if we were asked what

one person in Michigan is most responsible for the showing made, the spontaneous answer would be—Dr. Peterson. His name will ever stand foremost in our war record as having devotedly and unstintedly contributed his untiring efforts to the work of filling Michigan's quotas, for officers for the Medical Reserve Corps.

In the new order of procedure requested by the Surgeon General Dr. Peterson is not to be "shelved" nor will he remain unrecognized. His efforts and time will continue to be devoted to the work and our Society will profit by his renewed labors and loyal contributions to the increasing tasks that remain to be consummated. At this time we feel that this recognition should be given to the doctor and every member acquainted with the extent of the work that Dr. Peterson has performed.

There is but one end sought and one object to be attained from now on—the supplying of the necessary applicants to fill the quotas allotted to Michigan. We are all pledged to achieve that purpose. We must all work solely to supply these men from Michigan. Each man must answer personally—Is it my duty to go? Can I be spared from my community? You who find your answer in the affirmative come forward *now* and promptly file your application for a commission.

HONOR ROLL—MICHIGAN.

Ratio of physicians to population and area; number commissioned in Federal Medical services:

COUNTY	Area. Square Miles	Sp. Miles per Physician	Population Est. 1917	Population per Physician	Total No Physic'ns	Total Women Physic'ns	Physic'ns Under 45	Physic'ns Under 55	Members of Co. Society	Commis- sioned in M. R. C etc.
Alcona	684	136.8	5,711	1.142	5	..	2	3	2	..
Alger	920	185.0	8,995	1,799	5	..	5	5	4	..
Allegan	833	20.8	70,555	1,763	40	1	17	22	23	6
Alpena	584	32.4	21,213	1,188	18	..	4	7	16	1
Antrim	475	36.5	15,692	1,207	13	..	5	10	6	5
Arenac	374	46.7	9,640	1,205	8	..	6	6	2	..
Baraga	917	183.4	7,447	1,489	5	..	2	5	5	1
Barry	556	20.6	22,721	841	27	2	10	19	9	2
¹ Bay	443	5.7	72,515	929	78	2	31	54	48	7
Benzie	314	31.4	11,323	1,133	10	..	5	6	5	..
Berrien	569	6.5	56,874	653	87	7	31	58	38	7
Branch	497	15.1	25,605	775	33	1	9	17	18	2
² Calhoun	693	4.6	61,984	413	150	21	76	110	97	18
Cass	493	19.7	20,624	824	25	..	11	18	16	5
Charlevoix	411	25.7	22,954	1,434	16	..	10	11	5	2
Cheboygan	725	48.3	19,592	1,306	15	..	5	8	7	4
Chippewa	1,573	50.7	26,759	863	31	..	14	20	22	4
Clare	582	52.9	9,883	898	11	..	4	6	2	2
Clinton	571	19.0	23,129	770	30	..	15	24	25	3
Crawford	575	143.7	4,656	1,184	4	..	2	3	3	1
Delta	1,169	43.3	34,653	1,283	27	1	13	23	19	5
Dickinson	776	48.5	22,448	1,403	16	..	8	12	12	3
Eaton	571	11.2	30,499	598	51	2	14	30	34	3

1. Includes Bay City, population 47,494; physicians 65 [M.R.C. 7].
2. Includes Battle Creek, population 28,801; physicians 109 [M.R.C. 14].

HONOR ROLL—MICHIGAN—Continued.

COUNTY	Area, Square Miles	Sp. Miles per Physician	Population Est. 1917	Population per Physician	Total No. Physic'ns	Total Women Physic'ns	Physic'ns Under 45	Physic'ns Under 55	Members of Co. Society	Commis- sioned in M.R.C.etc.
Emmet	485	26.9	20,479	1,138	18	1	6	12	10	..
³ Genesee	655	5.7	81,163	705	115	3	68	93	92	22
Gladwin	519	86.5	9,762	1 627	6	..	3	4	3	..
Gogebic	1,133	42.0	28,147	1,042	27	..	18	23	17	5
Grand Traverse ..	467	18.7	26,197	1,047	25	2	11	17	18	1
Gratiot	579	17.0	28,820	847	34	1	13	22	26	3
Hillsdale	597	11.5	29,673	589	52	..	12	34	27	6
Houghton	1,019	14.5	104,181	1,488	70	1	50	60	47	12
Huron	854	14.7	35,192	606	58	1	14	48	50	1
⁴ Ingham	553	4.7	63,157	535	118	7	54	81	77	12
Ionia	579	12.3	33,550	713	47	1	21	30	34	5
Iosco	570	95.0	9,752	1,625	6	..	3	3	3	1
Iron	1,200	63.1	19,669	1,035	19	..	9	14	5	1
Isabella	572	24.9	23,207	1,009	23	1	5	17	11	3
⁵ Jackson	707	7.8	57,225	635	90	2	53	64	53	10
⁶ Kalamazoo	652	5.0	72,191	638	113	12	60	80	75	12
Kalkaska	573	95.5	8,800	1,466	6	..	2	4	4	..
⁷ Kent	860	3.3	180,626	689	262	10	119	189	150	37
Keweenaw	554	46.2	10,031	835	12	1	5	8	7	2
Lake	579	144.7	4,939	1,234	4	..	2	2	2	..
Lapeer	666	20.2	26,033	7 88	33	..	19	20	26	..
Lelanau	338	56.3	10,644	1,774	6	..	2	6	2	..
Lenawee	743	10.0	47,907	647	74	4	25	41	44	11
Livingston	568	22.7	17,736	709	25	1	9	16	14	2
Luce	920	153.3	4,748	791	6	..	6	6	5	..
Mackinac	1,044	74.6	10,377	741	14	..	2	6	1	..
Macomb	472	8.3	32,606	572	57	3	22	42	33	10
Manistee	562	21.6	26,688	1,026	26	2	10	14	4	5
Marquette	1,870	41.5	50,753	1,127	45	..	24	37	32	8
Mason	494	29.0	23,981	1,410	17	1	5	11	7	..
Mecosta	571	30.0	19,466	1,024	19	..	7	14	14	4
Menominee	1,056	58.7	25 648	1,424	18	..	6	12	13	5
Midland	529	52.9	14,005	1 400	10	..	4	8	7	4
Missaukee	582	52.9	11,551	1 050	11	..	7	7	6	2
Monroe	573	17.9	33,035	1,032	32	1	11	22	21	3
Montcalm	724	17.6	32,069	782	41	2	18	27	26	6
Montmorency	561	93.5	4,135	689	6	..	2	8	6	3
Muskegon	504	8.5	43,161	731	59	2	36	46	40	6
Newaygo	851	60.8	20,348	1,453	14	..	4	10	6	..
Oakland	886	9.7	53,066	583	91	3	43	66	54	7
Oceana	543	30.2	19,645	1,091	18	..	7	14	11	1
Ogemaw	580	38.7	9,740	649	15	..	1	5	3	1
Ontonagon	1,333	133.3	10 439	1,043	10	..	7	9	7	2
Osceola	577	38.5	71,911	1,194	15	1	7	11	8	..
Oscoda	576	....	2,434	No physicians reported						
Otsego	528	88.0	6,826	1,137	6	..	3	3	3	..
Ottawa	565	10.7	49,412	932	53	1	21	32	27	7
Presque Isle	678	75.3	13,021	1,446	9	..	5	9	9	4
Roscommon	538	538.0	2,627	2,627	1	..	..	1	1	..
⁸ Saginaw	828	7.9	95,179	906	105	7	35	66	57	19
Saint Clair	710	9 7	52,341	717	73	4	22	49	54	3
Saint Joseph	503	15.7	26,674	833	32	1	11	25	14	3
Sanilac	976	28.7	33,930	998	34	..	8	22	19	4
Schoolcraft	1,207	172.4	9,258	1,322	7	..	..	6	6	..
Shiawassee	557	10.9	33 246	651	51	..	21	37	30	13
Tuscola	827	29.7	34,913	872	40	2	17	26	27	3
Van Buren	617	15.4	33,185	829	40	1	13	26	27	3
Washtenaw	704	4.0	44,714	255	175	11	98	135	84	43
⁹ Wayne	620	0.4	1,008,859	683	1,483	58	462	1,246	918	256
Wexford	577	33.9	23,621	1,389	17	..	11	13	15	3
Totals	57,480	12.5	3,458,185	752	4,598	185	1,844	3 434	2,810	655

3. Includes Flint, population 52,159; physicians 85 [M.R.C. 17].
4. Includes Lansing, population 39,005; physicians 89 [M.R.C. 11].
5. Includes Jackson, population 34,730; physicians 71 [M.R.C. 9].
6. Includes Kalamazoo, population 47,364; physicians 94 [M.R.C. 10].
7. Includes Grand Rapids, population 125,759; physicians 225 [M.R.C. 29].
8. Includes Saginaw, population 54,815; physicians 75 [M.R.C. 17].
9. Includes Detroit, population 554,717; physicians 1,382 [M.R.C. 243].

HONOR ROLL.

ALLEGAN COUNTY.

Allegan—Elmer Douglas Osmun; Robert Page Stark; Howard Wallace Stuch. *Otsego*—Orrin Dean Hudnutt. *Plainwell*—Willard Robert Vaughan. *Saugatuck*—Robert J. Walker.

ALPENA COUNTY.

Alpena—Clarence Mason Williams.

ANTRIM COUNTY.

Atwood—Bernard J. Beuker. *Central Lake*—Edward Wilbur Vis. *Eastport*—Versile Mornington Gates. *Elk Rapids*—Louis Norman Yerkes. *Mancelona*—Worth W. Walton.

BARAGA COUNTY.

Pequaming—Frank Fremont Marshall.

BARRY COUNTY.

Delton—Maurice James Cross. *Middleville*—Birge Carlton Swift.

BAY COUNTY.

Bay City—Frederick Smith Baird; Frank Winne Brown; Edward Goodwin; Edward Spaulding Huckins; Roy C. Perkins; Floyd H. Randall; Royston Earl Scafford.

BERRIEN COUNTY.

Baroda—Louis Andrew King. *Benton Harbor*—Myron Geo. Becker, Jr.; Carl Apperson Mitchell; Warren P. Morrill; Burton Lewis Stevenson. *Bridgeman*—David Littlejohn. *Co'oma*—Spencer Van Barnum.

BRANCH COUNTY.

Coldwater—Wilbur Aaron Griffith. *Union City*—Walter Wm. John Bien.

CALHOUN COUNTY.

Albiou—Edwin M. Chauncey; George C. Hafford. *Atheus*—Elijah Van Camp. *Battle Creek*—James Thomas Case; James Adam Elliott; Robert Vincent Gallagher; Wilfred Haughey; Jesse James Holes; Awra Andrews Hoyt; Karl High Kellogg; Theodore Kolvoord; Asa Charles McCurdy; Willard Nichols Putnam; Kendall Brooks Rees; Albert Howard Ross; Leland Herbert Tower; Carl George Wencke. *Beford*—Kendall Brooks.

CASS COUNTY.

Cassopolis—Edgar Clarence Dunning; Chas. Maxwell Harmon; James Henry Kelsey. *Dowagiac*—Walter Stokes Sharpe. *Marcellus*—Ralph Phillip Jones.

CHARLEVOIX COUNTY.

Charlevoix—Allan Marshall Wilkinson. *East Jordan*—Hugh William Dicken.

CHEBOYGAN COUNTY.

Cheboygan—Arthur Julius Sabs. *Indian River*—Lyle D. McMillan. *Mackinaw*—Allen Charles Tiffany. *Wolverine*—Archibald McKillop.

CHIPPEWA COUNTY.

Fort Brady—Everett Allen Anderson. *Rudyard*—Robert Douglass Scott. *Sault Ste. Marie*—Emil Henry Webster; Rollin C. Winslow.

CLARE COUNTY.

Clare—Arthur Robert Mussell; Burton Jay Sanford.

CLINTON COUNTY.

Eureka—Myron Stephen Gregory. *St. Johns*—Walter Abner Scott; Don Harry Silsby.

CRAWFORD COUNTY.

Grayling—J. Atwood Whitaker.

DELTA COUNTY.

Escanaba—Harry J. Defnet; Victor Ryan; Heming Oliver Lindholm; John Jos. Walsh. *Rapid River*—John Lindsay Conover.

DICKINSON COUNTY.

Chauning—Robert E. Hayes. *Foster City*—Gustavus W. Moll. *Iron Mountain*—Samuel Edwin Cruse.

EATON COUNTY.

Charlotte—Stanley Allison Stealy. *Grand Ledge*—Wells Blakeslee Fillinger. *Vermontville*—Clyde L. D. McLaughlin.

GENESEE COUNTY.

Clio—Benjamin Thomas Goodfellow. *Flint*—Gordon Henry Bahlman; Chas. S. Ballard; Myron William Clif; Henry Cook; John W. Evers; George Reinhold Goering; Harry Clark Hackman; Wm. Henderson Marshall; Carl Frederick Moll; Ray S. Morrish; Arthur Venton Murtha; Robert Leo Phillips; George Kenneth Pratt; Herbert Elmer Randall; Floyd Albert Roberts; Walter Henry Winchester. *Grand Blanc*—Wells Cook Reid. *Goodrich*—Frederick J. Burt. *Swartz Creek*—Albert Briton Clark; James Houston.

GOGEBIC COUNTY.

Ironwood—Charles David Collins; Edward Hayes Kelly. *Wakarusa*—Theodore Suante Crosby; Donald E. MacPhail. *Watersmeet*—George James Curry.

GRAND TRAVESE COUNTY.

Traverse City—Wm. Daniel Mueller.

GRATIOT COUNTY.

Alma—Cyrus Bunting Gardner; Arthur Alma McNabb. *Ithaca*—Clarence Edw. Burt.

HILLSDALE COUNTY.

Hillsdale—Burt F. Green; Elihu Arthur Martin-dale; Harry Clay Miller. *Jonesville*—Ira James stoner. *Litchfield*—William Hodgines Atterbury. *Pittsford*—William Edward Allger.

HOUGHTON COUNTY.

Calumet—John Francis Barton; James Rubeo Lisa; Peter Duncan MacNaughton; John D. McKinnon; Bertram Henry Olmstead. *Dollar Bay*—Albert Roache Pearce; Raymond Moralee Schulte. *Houghton*—William Roy Bridgman; Robert Harkness; Alfred C. LaBine. *Laurium*—Murdoch M. Kerr; James Rhines.

HURON COUNTY.

Pigeon—Alfred Elihu W. Yale.

INGHAM COUNTY.

Lansing—Chauncy Levi Barber; Henry Shank Bartholomew; Wayne Alexander Cochran; Marshall L. Cushman; Marinus L. Holm; James Alton Humphrey; Ray Richmond McCrumb; Harold Abind Miller; Forest Ralph Ostrander; Arthur Elliott Owen; Milton Shaw. *Stockbridge*—L. A. Woodlock.

IONIA COUNTY.

Ionia—Verner H. Kitson; Julius Henry Powers; Perry Christian Robertson. *Lake Odessa*—Frederick L. Morse; Nelson McLaughlin.

IOSCO COUNTY.

Tawas City—Charles Vernor Crane.

IRON COUNTY.

Iron River—Wilhelm Carl Liefert.

ISABELLA COUNTY.

Blanchard—Ralph Ernest Dawson; Theodore Peter Vander Zalm. *Mt. Pleasant*—Chas. D. Pullen.

JACKSON COUNTY.

Brooklyn—Cortlandt Whitehead Schepeler. *Jackson*—Warren Bradley Anderson; Herman Duane Brown; Randall N. Cooley; Cuthbert Earl De May; Chas. Rowse Dengler; Harold Lee Hurley; John Joseph McCormick; Miar John McLaughlin; James Andrew McQuillan.

KALAMAZOO COUNTY.

Augusta—Robt. Eaton Weeks. *Kalamazoo*—Ross Uriah Adams; Ralph E. Balch; Jerome Francis Berry; Orton H. Clark; Ward Eugene Collins; Leo J. Crum; Dan Holton Eaton; Wm. Geo. Hoebeke; Rosco G. Leland; Louis Desenberg Stern. *Richland*—William Newton Kenzie.

KENT COUNTY.

Ada—Raymond C. Breece. *East Grand Rapids*—Fred Plumer Currier, Jr. *Grand Rapids*—Louis Barth; Horace J. Beel; Henry M. Blackburn; Alexander M. Campbell; Louis Henry Chamberlain; John Ralph Coryell; Clyde Wilson Deaver; Willis L. Dixon; John Clinton Foshee; Howard A. Grube; John Thompson Hodgen; John Newell Holcomb; Wm. Aloysius Hyland; John Carl Kenning; Frank

Cameron Kinsey; Milford Arthur Leach; Wm. De Voe Lyman; Wm. Robt. Manlove; Alex. M. Martin; Louis Thomas O'Brien; Henry John Pyle; Omer Roan; Leon Edmund Sevey; Ansel Brooks Smith; Richard Root Smith; Roland Egbert Toms; Sumner Merrill Wells, Jr.; Joseph Burgess Whinery; William E. Wilson. *Lowell*—Aaron C. Button; Hans Peter Gotfredsen. *Grandville*—Jacob Daniel Brooks. *Soldiers' Home*—Howard A. Grube.

KEWEENAW COUNTY.

Mohawk—Albert Roling Tucker. *Phoenix*—John Leo Kelliher.

LENAWEE COUNTY.

Adrian—Artemus Ward Chase; Ara Bird Hewes; Esli Terrill Morden; Leo John Stafford; Mahlon R. Sutton; George Mitchell Lochner. *Clinton*—Robert Anthony Davis. *Deerfield*—Guy Malverton Clafin. *Morenci*—Van Dale Barnes. *Rolling*—John Leonard Meddaugh. *Sand Creek*—William Henry Meddaugh.

LIVINGSTON COUNTY.

Howell—Vern N. Richesen. *Parshallville*—William John Rynearson.

MACOMB COUNTY.

Mt. Clemens—Henry G. Berry; Harold Arthur Kirkham; Charles Allen Martin; Harry Ferris Taylor; Russell William Ullrich; Arthur Jay Warren. *Romeo*—Robert McKay Greenshields; Edgar J. Miller; Milton Case Smith. *Washington*—Curenus B. Lockwood.

MANISTEE COUNTY.

Bear Lake—Ward Herman Norconk. *Copemish*—Russell Ragan Huston. *Manistee*—Elmer Alfred Gunderson; Harlen MacMullen; Andrew A. McKay.

MARQUETTE COUNTY.

Gwinn—David Christian Eisele. *Ishpeming*—Albert V. Deventer Braden. *Marquette*—Howard T. Carriel; Roscoe Conkling Main; Harold Boyce Markham. *Michigamme*—Isaiah Sicotte. *Negaunee*—Ira A. Abrahamson; Emile Cyrus Houle.

MECOSTA COUNTY.

Big Rapids—Wm. Temperance Dodge; Rolla George Karshner; Glen Dewey Ransom; Gordon Hurst Yeo.

MENOMINEE COUNTY.

Menominee—Calvin Ross Elwood; Walker Raleigh Hicks; Stephen Coddington Mason; Earl Vinton McComb; Henry Thomas Sethney.

MIDLAND COUNTY.

Coleman—Chas. Vernell High, Sr. *Edenville*—John Elmer Heslop. *Midland*—James Henry Johnson; Rene James St. Louis.

MISSAUKEE COUNTY.

Lake City—Nelson Abbott; John Foge Doudna.

MONROE COUNTY.

Dundee—Hugh Rannells Hildebrant. *Monroe*—Herbert Wm. Landon; Frederick Clayton Thiede.

MONTCALM COUNTY.

Carson City—Don Villette Hargrove. *Greenville*—Albert Stewart Barr; Albert James Bower. *Howard City*—Noble William Miller. *Lakeview*—Lee Earl Kelsey. *Stanton*—Mortimer E. Danforth.

MONTMORENCY COUNTY.

Hillman—George Fenton Lister; Albert Joachim Schmaller. *Lewiston*—Archie Currie MacKinnon.

MUSKEGON COUNTY.

Montague—Henry Augustus Kling. *Muskegon*—Constant M. Colignon; Burns Rush Eastman; Leslie Albert van der Linde. *Whitehall*—Henry S. Cole; William Louis Hercik.

OAKLAND COUNTY.

Birmingham—Lloyd Gully Campbell; George Paterson Raynale. *Clarkston*—Russell Graham Edgar. *Oxford*—George William MacKinnon. *Pontiac*—Lucius Augustine Farnham; Ellsworth Orton. *Rochester*—Charles Spurgeon Strain.

OCEANA COUNTY.

Hart—Clinton Day.

OGEMAW COUNTY.

West Branch—Robert Jay Beeby.

ONTONAGON COUNTY.

Ewen—Edward Alexander Florentine. *Greenland*—Edwin James Evans.

OTTAWA COUNTY.

Berlin—John Jay Miller. *Coopersville*—Harry Lieffers. *Grand Haven*—Cornelius John Addison. *Holland*—George Henry Thomas; William Westrate. *Nunica*—Clayton Andrew White. *Zeeland*—Joe DePree.

PRESQUE ISLE COUNTY.

Onaway—Joseph Sill; Fred. William Wastell. *Posen*—Fred Porter Nevius. *Rogers City*—William Woodborough Arscott.

SAGINAW COUNTY.

Birch Run—Harvey Benjamin McCrory. *Burt*—George Wesley Peart. *Saginaw*—George Laviorious Alger; James Deacon Bruce; Benj. Franklin A. Crane; Walter Alexander De Foe; Wm. Franklin English; Bernhard Friedlaender; Leon Brayton Harris; Matthew Kollig; Alexander Reid McKinney; Henry John Meyer; Wm. Louis Miller; James L. Passmore; Norman James Pike; Emil Philip W. Richter; Bert Bessac Rowe; John Thomas Sample; Roy S. Watson.

SANILAC COUNTY.

Decker—Clayton Gregg Woodhul. *Marlette*—

Raymond G. Tuck. *Peck*—John Clyde Webster. *Snover*—Hugh H. Angle.

SHIAWASSEE COUNTY.

Durand—James Arthur Rowley. *Byron*—Hermon Ed. Boice; Robt. Ray Fox. *Henderson*—Thos. Grover Amos; Glenn Taylor Soule. *Owosso*—Alfred F. Arnold; James Johnson Haviland; Harold A. Hume; Jesse Obed Parker; George Peter Sackrider; Egerton Thomas Wilson. *Shaftsbury*—William Hebert Dunham. *Vernon*—Arden Nathan Howe.

ST. CLAIR COUNTY.

Algonac—Walter Elijah Bostwick. *St. Clair*—Frank Vern Carney. *Yale*—Wm. Guthrie Wight.

ST. JOSEPH COUNTY.

Burr Oak—John Joslyn Kelley. *Colon*—Wm. Eck Doran. *Three Rivers*—Arthur W. Scidmore.

TUSCOLA COUNTY.

Caro—Frederick P. Bender. *Millington*—Wynne Clark Garvin. *Richville*—Ottomar Von Renner.

VAN BUREN COUNTY.

Bangor—Norman Dwight Murphy. *Hartford*—John Duncan Stewart. *Lawrence*—Duane Wesley Crankshaw.

WASHTENAW COUNTY.

Ann Arbor—Robert H. Baker; Hugh McDowell Beebe; Clarence Austin Berge; James Fleming Breakley; Roy Bishop Canfield; Otis Merriam Cope; Robert H. Criswell; Roland S. Cron; Charles Beyland G. de Nancrede; Richard Wm. Denney; Carl Walter Eberbach; Joseph Alexander Elliott, Jr.; Nellis Barnes Foster; Albert Carl Furstenberg; Evan Griffith Galbraith; Edwin Carl Ganzhorn; John L. Gates; William Henry Gordon; Harry H. Hammel; Howard Morton Holcombe; Robert Scott Ideson; Arnold F. Jacoby; Hubert Rudolph John; Harthur Lewis Keim; Lyle Boyle Kingery; Rollan Walter Kraft; Maurice Clock Loree; Harry M. Malejan; Russell A. A. Oldfield; John Jeremiah O'Leary; Reuben Peterson; Rudolph Herman Ruedemann; Walter Neale Salisbury; John Wesley Sherrick; Floyd Raymond Town; Geo. Douglas Treadgold; Warren Taylor Vaughan; Damon Orian Walthall; Udo Julius Wile. *Sal'em*—Edward Payson Waid. *Ypsilanti*—Howard Isaac Post; Thomas Robert Whitmarsh. *Whitmore Lake*—Guy Garland Alway.

WAYNE COUNTY.

Detroit—De Witt Carter Adams; Edward Joseph Agnelly; Herman Fred Albrecht; Frank Clinton Anderson; Warren L. Babcock; Frederick W. Baeslack; Max Ballin; Don C. Bartholomew; Charles Barton; Robert J. Baskerville; Robert Beattie; Harold A. Beck; Clarence Herbert Belknap; William Oscar Benjamin; Zina Braden Bennett; Harry

S. Berman; Isadore I. Bittker; Fred Horton Blanchard; Jacob Rolland Bolasny; Edmund W. Bolio; Ralph Hug Bookmyer; Richard F. Boonstra; Henry Robt. Boyes; Frank B. Broderick; Clark D. Brooks; William Horatio Browne; Wm. S. Brownell; Bruno Berthold Brunke; John D. Buck; Frederick G. Buesser; Glenn A. Bulson; John Knox Burns, Jr.; Lowell M. Bush.

Thomas P. Camelon; Geo. Henry Campau; Duncan Alexander Campbell; Clarence Candler; Edward K. Carmichael; Glenn Blish Carpenter; James G. Carr; Henry R. Carstens; John Henry Carstens; Albert Edward Catherwood; Aaron Lee Chapman; Clarence A. Christensen; Harold Francis Closz; Don Avon Cohoe; Homer C. Collins; Lannes Irving Condit; Ray Connon; Bernard Francis Corbett; Langdon T. Crane; Ernest Keys Cullen; Hampton Pharr Cushman.

Samuel Solomon Danziger; Milton Alfred Darling; Jos. Laudium Desrosiers; Harry Franklin Dibble; John Clinton Dodds; Daniel Raymond Donovan; Ira George Downer; David Bernard Downing; George Adam Drescher; Leo John Dretska; Adolph Ernst Dreyer; Charles Frederick DuBois.

Frederick Eakins; Clarence Henri Eisman; Rolan Renford Ensor; Arthur William Erksitz.

George E. Fay; Ray Leopold Fellers; Charles Joseph Foley; Antonio Joseph Font; Walter David Ford; Henry Edgar Fraser; George Edward Frothingham.

Claude Benjamin Gaines; August Ernst Gehrke; Isaac S. Gellert; William Stephen Gonne; John Whitlock Gordon; James Gostanian; Raymond Salot Goux; William Gramley; Hunter Lee Gregory; Thomas Reuben Keller Gruber; Samuel Charles Gurney.

Ernest William Haass; Carl Hanna; Beverly Drake Harison; Winfred Bronsart Harm; Albert Edward Harris; Earl R. Haris; John G. Harvey; James Ward Hawkins; Austin Wm. Heine; William Henderson; Preston M. Hickey; Louis J. Hirschman; George Hoffmeister; Arthur D. Holmes; Lawrence Nicholas Host; Abraham Willis Hudson; Harold S. Hulbert; Leroy Wetmore Hull; Willard Hunter Hutchins.

James W. Inches; Harry H. Jackson; Byron Homer Jenne; Alpheus Felch Jennings; Charles G. Jennings; Nathan Joseph Jessup; Morrell Mallory Jones.

Ladislaus Roman Kaminski; Zeno Leo Kaminski; Wm. James Kane; John Fredk. Kelly; Johnston Burnside Kennedy; William Young Kennedy; Frederick Clinton Kidner; Edw. David King; Paul Anthony Klebba; George Leo Koessler; Abraham Kovinsky; Albert Henry Krohn; Duffield Roy Kruger.

Alfred Daniel LaFerte; Rudolph Harold Lambert; Carl Niel Larsen; Bror Hjalmar Larsson; A. F. J. Lecklider; Ernest C. Lee; Henry Robt. Leiblinger; Daniel James Leithauser; Alfred E. Lemon; Paul Herman Lippold.

Nelson MacArthur; Robert Bruce Macduff; Frank Benjamin MacMullen; Otis Bush Mallow; Vincent Samuel Mancuso; Walter Williamson Manton; Thomas Blaine Marsden; Robert Michael Martin; James Dwight Matthews; Kenneth Fuller Maxey; Emil Valentine Mayer; Willard D. Mayer; Frederick McAfee; Arthur McArthur; James Herald McCall; Wm. Raymond McClure; Carey P. McCord; Crawford Ward McCormick; Theodore Alexander McGraw, Jr.; George Edwin McKean; Angus McLean; Henry Oliver McMahon; Charles H. Merrill; Ellsworth Paro Mills; Robert Conrad Moehlig; Stephen Gregory Mollica; Harold L. Morris; Walter Muellenhagen; Charles Robert Mueller, Jr.; Thomas F. Mullen.

Arthur Joseph Neumann; Frederick Henry Newberry; Arthur Wilmot Newitt; Harry J. Noble; Ralph Arthur Norris.

William Austin O'Brien; Harold Fredk. Ohrt; Geo. Vernon Oill; Robert W. Goldsborough Owen.

Leon Edward Pangburn; Walter Robert Parker; Grover Cleveland Penberthy; Orlando Wm. Pickard; Lyman Justin Pinney; George Edward Potter; Presley Louis Pound; William Henry Price; Wyand van Korleer Pyle.

Octavius Marion Randall; Claude Burton Ray; Harry Walter Reed; Heinrich Albert Reye; James Milton Robb; Paul Charles Rohde; Herman Hjalmar Runo; Frank Leithe Ryerson.

Homer E. Safford; Wm. Graham Schlegelmilch; Harry B. Schmidt; Ernest Charles Schultz; James Bradford Seeley; Ward Francis Seeley; Alphon Mahlon Shafer; Reed Albert Shankwiler; Lyle Orting Shaw; Harold Koch Shawan; William LaRue Sherman; Burt R. Shurley; Arthur Ralph Smeck; Alba Lee Smith; Clarence Vernon Smith; Eugene Smith, Jr.; Frank Harvey Smith; Frederick Janney Smith; Theodore Henry Smith; Clarence Stefanski; Frank T. F. Stephenson; Alexander Meiklejohn Stirling; Lindley H. Stout; Luther Hinton Stout; Frank Suggs; Hugh Albert Sullivan; Angus Price Sutherland.

Rolfe Tainter; Griffith Arthur Thomas; Arthur Rudolph Timme; Charles Lewis Tomsu; Harry N. Torrey; Emmett Calvin Troxell; Arthur Turner.

Clyde Roger Van Gundy; James A. Van Horne; George Van Rhee; Colin Campbell Vardan; John Walter Vaughan; Victor C. Vaughan, Jr.; Milton D. Vokes.

Frank Banghart Walker; Jos. A. Wall; Charles

R. Walsh; Frank Norman Wilson; George Wayne Wilson; Robert A. Wollenberg; Grover C. Wood.

Harry Benjamin Yoh; John Campbell Young.

Eloise—Joseph Harvey Chance. *Hamtramck*—Robert Henry Carmichael. *Highland Park*—Martin William Caveney; George Samuel Foden; Richard Henry Juers. *Northville*—Thomas Burnfield Henry. *Redford*—Lewis Nelson Tupper; Roy Du B. Tupper. *Trenton*—Howard Bligh Kinyon. *Wayne*—Romeo Horatio Earle. *Wyandotte*—Glen Long Coan; William H. Homer; Joseph G. Knapp.

WEXFORD COUNTY.

Manton—Paul W. Bloxsom. *Mesick*—John For-dyce Gruber; Albert Edw. Stickley.

THE NEED FOR MEDICAL OFFICERS.

The time has come for a plain open discussion of facts and the clear presentation of the obligation that rests upon the medical profession in the work that is and must for the present be the foremost business of every loyal citizen—War.

There are now in active service 22,000 medical officers. Every man who has accepted a commission up to 50 years of age has been ordered to active duty.

It is intimated that our army is to be increased to 3,000,000 men with a possibility of a further increase to 5,000,000.

It was the rule that the ratio of medical officers should be seven medical officers to every 1,000 men. The experience of our Allies and our own experience of the past year demonstrates that that ratio is too small. The number has now been increased to the ratio of 10 medical officers to every 1,000 men.

An army of 3,000,000 will require 30,000 medical officers. An army of five million will create the need of 50,000 medical officers—doctors.

Reliable surveys reveal that we have approximately 142,000 doctors in this country of every age, active and retired from practice. There are 76,067 doctors between the ages of 21 and 45.

The Surgeon General is asking for 5,000 doctors for immediate duty and 2,500 a year for the duration of the war at our *present* mobilization plan of three million men. The

Navy is asking for 2,000 doctors for immediate duty.

The number of medical officers discharged during the past few weeks has exceeded the enlistments so that in place of increase there has been a *decrease* in the number of medical officers. The discharges are occasioned by physical disabilities, domestic emergencies, sickness and deaths. For the immediate future the number of discharges is going to increase as the work becomes heavier and the demands of field work increases.

During the past year the response has been very largely inspired by general appeal and no real systematic effort was made. It is true that the Medical Division of the Council of National Defense conducted a partial survey and ineffectual attempt. Its officers did create state committees and the state committees succeeded in organizing some states but were not successful in many states. The work was never fully organized and was characterized by many letters, bulletins and disorganized effort that created much confusion and doubt. Further, it must be remembered that the Council of National Defense is merely an advisory body and has no vested authority or jurisdiction.

"The Council of National Defense shall nominate to the President and the President shall appoint an Advisory Commission. The members of the Advisory Commission shall serve without compensation, but shall be allowed actual expenses of travel and subsistence when attending meetings or engaged in investigations pertaining to its activities. The Advisory Commission shall hold such meetings as shall be called by the Council or provided by the rules and regulations adopted by the Council."

Two or three divisions of the Advisory Commission have assumed functions that the law doesn't give them and this is especially true of the medical section. The letter heads of the medical section are printed "Council of National Defense" and contain nothing about its being merely an advisory commission.

Since writing the above paragraph we have again been assured of the correctness of the statement therein contained.

On April 20th the Surgeon-General of the Army appealed direct to the officers of the American Medical Association for assistance in securing the needed Medical Officers. The War

Committee of the A. M. A., under authority granted by the House of Delegates at the New York Annual Meeting, promptly replied and pledged to the Surgeon-General the support and activity of the National Organization and its constituent units, the State and County Societies, to supply the needs of the Medical departments of the Military forces and placed at the disposal of the Surgeon-General the valuable and efficient assets of the A. M. A. as are centralized in our national headquarters in Chicago.

Here it is well to impart that the A. M. A. has not been inactive during the past year. It has supplied the Surgeon-General with data concerning every applicant for a commission; its complete personal record files were constantly consulted by Washington officials; thousands and thousands of printed circulars, cards, records, tabulated lists in addition to distribution of 120,000 application blanks and the clerical force of 200 odd individuals have been engaged for weeks on department work. Officers of the association have been in constant touch with the Surgeon-General and Dr. Simmons has been in Washington every week or two. The impression must not be maintained that the A. M. A. has been inactive. On the contrary it has done a tremendous amount of work which the Surgeon-General openly acknowledges.

The tender of the A. M. A. was immediately accepted by the Surgeon-General. A conference of officers of the A. M. A. and of State Secretaries was promptly called and held in Chicago on April 30th, 1918. It was attended by President Charles Mayo and President-elect A. D. Bevan, trustees and officers of the A. M. A., the A. M. A. War Committee and forty-three state secretaries. In addition there were three personal representatives of the Surgeon-General. The conference was in session all day and concluded with the adoption of a definite plan of action. This plan will be discussed in another part of this editorial.

The foregoing statement causes it at once to be apparent that the following obligation rests upon the profession:

1. Seven Thousand Doctors are needed in

the next sixty days—preferably thirty days.

2. Twenty Thousand additional doctors will be needed if our army is increased to five million men.

3. Twenty-five hundred to five thousand doctors will be required each year for the remainder of the war.

4. Michigan must supply 250 doctors in the next 30 to 60 days.

5. Michigan must supply not less than 12 doctors *every month* thereafter for the *remainder* of the war.

6. *One out of every four doctors in Michigan must apply for a commission* and be ready to go when called.

7. Rural communities must not be deprived of its doctors. Neither must industrial factories and transportation companies be bereft of their company doctors.

8. Men physically incapacitated for army service must stand ready to relinquish their practices and be willing to supply the needs of other communities so that the physically fit doctor of that community may be released for army service. Such service is equally patriotic.

Doctors of Michigan the call has come to you. It becomes imperative that you give it careful consideration and determine *your* responsibility, *your* duty and how *you* shall respond. The Chicago Conference adopted the following resolution:

To William C. Gorgas, Surgeon General, U. S. Army:

We, the secretaries of the several constituent state medical associations of the American Medical Association in conference assembled at Chicago, April 30, 1918, declare:

We express our gratification that the Surgeon General has called upon the American Medical Association and all its constituent bodies to co-operate with him in mobilizing the medical profession for the war;

We do hereby pledge to the Surgeon General and through him, to our flag and our country that we will use every power at our command to bring to the military forces of the country such assistance as the Surgeon General may require of us;

It shall be our endeavor to co-operate to the fullest extent with any organizations now existing

or that may hereafter be created in the execution of this pledge.

This conference appeals in the strongest terms to the patriotism and loyalty of every member of the medical profession to give serious thought as to where his duty lies and hold himself in readiness to subscribe to the cause in order that the honor, dignity and patriotism of the medical profession of the United States may forever be placed beyond question.

Respectfully submitted,

F. C. WARNSHUIS, Michigan.

E. J. GOODWIN, Missouri, Chairman.

D. E. SULLIVAN, New Hampshire.

Committee on Resolutions.

To acquit ourselves and honorably fulfil this pledge the following plan of action has been instituted by the American Medical Association:

ORGANIZATION.

1. War Committee of the American Medical Association. The Chairman of this committee to be the direct avenue of approach to and from the Surgeon-General.

2. State War Committee appointed by the State Society President composed of three men of whom the Secretary shall be Chairman. Such State War Committee shall be the avenue of approach to the National Committee and will receive its orders and be responsible for the work within the boundaries of its state.

3. County War Committees of County Societies. These County Committees to be appointed by County Societies with the County Secretary as Chairman. The County Committee becoming responsible for the work in its County and reports to the State Committee.

With such a compact and systematized organization emanating from an already efficient professional organization it is proposed to attain the following ends:

ACTIVITY.

1. A survey of every county of the state and a personal census of every doctor. This data to supply accurate information as to fitness for service and ability to serve. Likewise to determine the needs of communities and to ascertain in how far the men practicing in every com-

munity can be spared without jeopardization of civic and industrial requirements.

2. The determining of quotas of medical officers from each community that are available for service.

3. The solicitation of doctors who can go and can be spared to cause them to apply for and accept commissions.

4. In the event of pressing need to supply locum tenens so as to protect civic needs and release doctors for active service.

5. To carry out the orders of the National War Committee as they may be issued and to do our part to respond to the demands made upon the profession by the Surgeon-General.

President Biddle has appointed the following State War Committee for Michigan:

Chairman: F. C. Warnshuis, State Sec.
Jennings, Detroit.
Turner, Houghton.

The activity of this committee is recorded elsewhere in this issue.

We as a profession must become thoroughly convinced and impressed with the fact that a solemn responsibility is ours. We must realize fully and completely that *we are at war*. We are engaged in a fearful struggle that demands our most intensive, prompt and active support. Definite things must be done *now*. *Prompt* action must come. We cannot postpone, delay or put off. War is now our foremost business and so *supercedes* everything else.

You secretaries of County societies must *immediately organize* the work in your counties. *Drop your practice*, everything, to perfect your local organization. When a wire, or letter is sent you do not put off for one moment the answering of that letter or the performance of the duties conveyed in that communication. *Answer by first mail*. Be *prompt*, Wake up! ! *We are at War!* ! you *must* respond with military snap and promptness. For your country's sake don't postpone doing what is asked of you. The need is great. You *must* realize and acquit yourself of the trust imposed.

To You Doctors we urge that you review and deliberate, yes into the far hours of the night,

as to what is your personal duty in this crisis. Remember you owe an allegiance and duty to your country and its flag. It is not, must not be a question as to what are you going to get out of it. It resolves itself into, What are *you* going to *give*? We must sacrifice and sacrifice until it hurts and hurts if needs be to the very marrow. What are *you* going to give? What are *you* going to do? Pay no attention to your neighbor. This is *your* problem, it is for *you* to give *your* answer. What is *your* answer?

Personally we know what the response to this call will be by the profession of Michigan. We stated at the Conference that Michigan would respond in fullest measure and that we would "Carry On" to the end. To do so we must become aggressively active *now*.

Editorial Comments

We refer our members to the resolution adopted regarding the obligation assumed to fill our quota for the Medical Reserve Corps and the duty resting upon each member. We also refer our members to the two editorials on the same subject in this issue. Get in touch with your County Secretary and lend him your every aid in this work. We desire to impress you with the pressing need that exists for Medical Officers. You who can go are needed now.

In 1910 the state's attorney of Cook County (Chicago) was petitioned to institute "quo warranto" proceedings against the American Medical Association on the grounds that the Association's affairs were being conducted illegally in that its officers were elected at annual sessions held outside of the state of Illinois. The state's attorney refused to take action in the matter, and later, the attorney general of the state, who was appealed to, also refused to act. January 5, 1911, mandamus proceedings were begun in the Circuit Court of Cook County, Illinois, to compel the state's attorney to initiate the quo warranto action which he had declined to institute. Until December 20, 1915, the issue was between the parties asking for the "mandamus" and the state's attorney of Cook County, Illinois; the point at issue being the technical one as to whether the states' attorney was compelled to act or had discretionary authority in the matter. The case went through the lower courts and finally was carried to the Supreme Court of Illinois, which in December, 1915, refused to hear arguments on the

merits of the cause as it related to the American Medical Association, but ordered the Circuit Court to take up the original quo warranto proceedings designed to raise the question of whether or not Illinois corporations "not for profit" are compelled to hold their elections and conduct their business within the confines of the state. Up to this point the American Medical Association was not technically interested in the controversy; now, however, it became a party in the action. Quo warranto proceedings against the members of the Board of Trustees were instituted in the Circuit Court of Cook County, Illinois, which after trial rendered a decision favorable to the Association. The case was then carried to the Appellate Court of Illinois, which confirmed the decision of the Circuit Court. An appeal was finally made to the Supreme Court of Illinois, which last week (April 16) rendered its decision, settling the question. This decision is entirely satisfactory so far as the Association is concerned. One paragraph of the opinion reads:

It seems reasonably to follow that if a corporation not organized for pecuniary profit may hold meetings at stated times outside of the State of Illinois, composed of delegates selected by the constituent associations, for the transaction of business of the corporation, it is not unlawful to authorize and provide for the election by said house of delegates of trustees of the corporation. The American Medical Association was organized solely for the purpose of the advancement of medical science. Its purpose was to improve methods for the treatment and prevention of disease of the human race. Its usefulness for these purposes would be seriously interfered with, if not absolutely destroyed, if it could not provide for the election of trustees from the most efficient men in the association throughout the United States, by delegates selected by the constituent associations from the various States in the Union. Such authority to the house of delegates is conferred by the by-laws and is not in conflict with or prohibited by the constitution or laws of Illinois relating to corporations not for pecuniary profit.

The decision is important not only to the American Medical Association, but also to all organizations incorporated under the law of Illinois—in fact of any state—governing corporations "not for profit."

BOIL IT DOWN.

Have you had a thought that's happy?
Boil it down.
Make it short and crisp and snappy—
Boil it down.
When your mind its gold has minted,
Down the page your pen has sprinted,
If you want your effort printed,
Boil it down.

—The Survey.

Correspondence

U. S. Base Hospital, No. 17, France,
April 3, 1918.

Dr. J. B. Kennedy, Grace Hospital,
Detroit, Mich.

My Dear Doctor:

I just received a letter from Detroit, enclosing a clipping from one of our daily papers, of an article written by you on the present status of Medical education in Michigan and Detroit. I read it with great interest for it put the matter in a very graceful and diplomatic manner before the public, and without reflecting criticism, it pointed out the benefits the public of Detroit would receive from scientific medicine when taught in a great city that has abundant hospitals and a vast field of clinical material.

After spending several months here among the Military Hospitals one is quickly convinced that the young surgeon of today must have clinical experience, to bring about the desired results in reparative surgery, and to prevent, as far as possible, a multitude of hopeless cripples as America's souvenir of this war.

I wish to congratulate you on your splendid article, and thank you for what I believe you have done for the benefit of Medicine, Clinical Surgery and Clinical Medicine can only produce satisfactory results when taught in great centers of population, where all varieties of diseases and injuries can be daily observed by the ambitious student of scientific medicine.

We are quite busy at the hospital now. We received a convoy of 367 patients last night, and a small convoy yesterday (Americans' and two of them had received "The Croix de Guerre" after being carried to the rear of the battle field. This certainly makes one feel proud of the American soldiers, and I believe in time that the Americans will have as many Military honors (proportionately), as the soldiers of any other nation. But we do not desire that any shall receive the Iron Cross of the Hun.

Trusting that you and your friends are all well, I am, as ever,

Yours truly,

ANGUS McLEAN.

State News Notes

You are invited to attend the 30th Annual Clinic of the Alumni Association of the Detroit College of Medicine and Surgery, Detroit, June 3rd to 7th, 1918.

June 3rd—Harper Hospital—Dr. C. E. Simpson in charge.

8 to 11 a. m.—Surgery. Max Ballin, J. H. Carstens, George Potter, W. E. Blodgett, George Kamperman. Medicine, C. C. Jennings, C. W. Hitchcock, Wm. A. Evans. Out Patient Department.

11 a. m. to 5 p. m.—Amphitheatre. Hugh T. Patrick, Chicago, Illinois, Neurology. Plinn F. Morse, H. R. Varney, Fred H. Cole. Don M. Campbell, G. E. Frothingham. Out Patient Department.

8:30 p. m.—Wayne County Medical Society Building. Dr. Robert Morris, New York City, Surgery of the Psychosis and Neuroses.

June 4th—Grace Hospital—H. W. Hewitt in charge.

Amphitheatre. R. J. Palmer, Goitre. Amphitheatre. C. E. Vreeland, Vomiting, Room No. 2. George Myers, Infection of Hands. Amphitheatre. John T. Watkins, Early Diagnosis of Pulmonary Tuberculosis, Room No. 2. R. H. Stevens, Roentgen Diagnosis of Gastric Ulcer. Harper Hospital Amphitheatre. Dr. Robert Morris, New York City, Appendicitis, four phases. Amphitheatre Grace Hospital. Frank Kelly, Inguinal Hernia, Room No. 2. H. W. Plaggemeyer. Some Practical Points in Treatment of Prostatic Diseases. Amphitheatre Grace Hospital. J. B. Kennedy, Procidentia Uteri. Room No. 2. David J. Levy, Diseases of Children. Amphitheatre Grace Hospital. Hugh Hagerty, Pyosalpinx, Room No. 2. Harold Wilson, Chronic Nasal Infections. Reception at College Building, Laboratory Demonstration, Inspection of Building, Luncheon.

June 5th—St. Mary's Hospital—James E. Casey in charge.

W. J. Seymour, Surgery. W. A. Repp, Treatment of Uterine Prolapse. E. W. Mooney, Pneumonia. A. W. Ives, Neurology. Wm. M. Donald, Infections of Unusual Type, during the past spring. Ray Andries, Diseases of the Biliary Tract. A. W. Blain, Goitre. A. P. Biddle and R. C. Wollenberg, Treatment of Cutaneous Disorders in Faulty Metabolism. Harper Hospital Amphitheatre. John B. Deever, Philadelphia, Pa., Surgery. W. E. Keane, Determination of Source of Pus in Urine. Dr. Eugene Smith, Ophthalmology and Otology. W. J. Wilson, Jr., Use and Abuse of Digitalis. F. W. Robbins, Treatment of Syphilis. G. C. Chene, Gastro-Intestinal Diagnosis with X-ray. Robert W. Gillman, Some of the Common Eye and Ear Diseases. Stanley G. Miner, Nose, Throat and Chest Surgery. Neal L. Hoskins, Bedside Clinic. A. Kersten, Value of X-ray in Disorders of Pelvis of Kidney. Class Reunions, 1873, 1878, 1883, 1888, 1893, 1898, 1903, 1908, 1913.

June 6th—Harper Hospital—R. C. Jamieson in charge.

Surgery. C. D. Brooks, John N. Bell, A. D.

McAlpine, E. G. Martin, Daniel LaFerte. Medicine. E. W. Haass, Hugo Freund, Wm. A. Evans. Amphitheatre Harper Hospital. Bertram W. Sippy, Chicago, Illinois, Peptic Ulcer. Herman Kiefer Hospital. A. M. Wehenkle, Tuberculosis. Guy L. Kiefer, George Sewell, Acute Contagious Diseases.

8:30 p. m.—Smoker, Vaudeville, Dutch Lunch, Annual Election.

June 7th—Providence Hospital—A. E. McMurdie in charge.

I. S. Gellert, Pre-Natal Care. F. T. F. Stephenson, Medicine. R. E. Mercer, Tonsils, Adenoids and Nasal Development. H. W. Yates, Gynecology. Carl Beck, Chicago, Ill., Cancer. Dr. D. R. Clark, Paretic Dementia. E. J. Panzner, General Surgery. J. E. Davis, Diagnosis of Infections of the Vagina, Uterus and Adnexa, with Case Illustrations. J. H. Dempster, Corneal Ulcer. I. L. Polozker, Diseases of Children. Robert Beattie, Ophthalmology.

8:00 p. m. Graduation Exercises, Knights of Columbus Hall. Rev. M. S. Rice, Speaker.

Section officers were elected as follows:

Medicine:

Chairman—Walter J. Wilson, Detroit.

Secretary—Wm. Northrop, Grand Rapids.

Surgery:

Chairman—Joseph H. Andries, Detroit.

Secretary—F. C. Witter, Petoskey.

Gynecology and Obstetrics:

Chairman—G. A. Kamperman, Detroit.

Secretary—H. J. Vandenburg, Grand Rapids.

Ophthalmology and Oto-Laryngology:

Chairman—L. A. Roller, Grand Rapids.

Secretary—C. N. Colver, Battle Creek.

The Chicago Medical Society wishes to invite the Physicians of the Army and Navy and the various examining boards of the State as their guests during the meeting of the A.M.A. Headquarters will be "Parlor A" La Salle Hotel.

We can assure you it will afford the Medical Society much pleasure to have the physicians engaged in the service visit Chicago during this meeting and will spare no means to make their visit pleasant.

The 69th Annual Meeting of the American Medical Association will be held in Chicago, June 10th to 14th. There will be several interesting meetings foremost of which are the evening Patriotic Meetings and the Thursday meeting in which all the sections combine. If it is possible to leave your work make it a point to attend this meeting. You will be well repaid.

Dr. J. C. Parnall, for three years head of the Jackson health department, has resigned and ac-

cepted the appointment as Superintendent of the University Hospital at Ann Arbor.

Dr. R. J. Harrington has been appointed health officer of Muskegon succeeding Dr. A. B. Eagan, resigned.

Dr. B. B. Godfrey has been appointed health officer of Holland.

Dr. A. H. Rockwell has been appointed full time health officer of Kalamazoo at an annual salary of \$3,600.

Dr. W. T. Dodge has been assigned charge of a Surgical Division at the Base Hospital at Camp Sherman. His address is Base Hospital, Camp Sherman, Chillicothe, Ohio.

Lt. Col. Angus McLean is expected to return the first part of June after a year of service with the Harper Unit "Overseas." Dr. C. D. Brooks of Detroit has been ordered to report to the Harper Unit July 1st.

It is reported that Unit Q, Dr. R. R. Smith, Grand Rapids, Commanding, sailed the middle of May.

President Hume has not completed his committee appointments so we are unable to publish them in this issue. They will appear in the July issue.

We learn from newspaper reports that Drs. V. C. Vaughan, Sr., and Walter Parker have been promoted and now hold the rank of Colonel.

Deaths

Just as we go to press we are informed of the sudden death of Dr. A. T. Abrams of Dollar Bay on the evening of May 21st. Death was due to heart disease.

TRIAL TUBES OF CHLOROZENE.

It is interesting to learn that The Abbott Laboratories of Chicago are sending to physicians, on request, convenient trial tubes of ten Chlorazene tablets. In view of the growing importance of the Dakin discoveries, we suggest to our readers that they avail themselves of this generous offer.

Hall's Catarrh Cure.—Another victim fails to get the hundred dollars offered in cases in which this preparation failed to effect a cure. The promoters informed its victim that before paying the guarantee, he would have to prove that his case was one of simple catarrh not complicated by any other disease and that he had taken sufficient of the cure. (*Jour. A.M.A.*, April 13, 1918, p. 1113).

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

HILLSDALE COUNTY

A called meeting of the Hillsdale County Medical Society to do the business of the Annual Meeting which was not held.

Meeting held at the office of Dr. C. T. Bower. Present Drs. McFarland, Frankhouser, Bower, Bell, and Fenton.

Meeting called to order by the President, Dr. O. G. McFarland.

The Secretary being absent the reading of the minutes was dispensed with.

The following officers on motion were elected for the present year:

President—O. G. McFarland, Montgomery.
Vice-President—S. B. Frankhouser, Hillsdale.
Secretary-Treasurer—D. W. Fenton, Reading.
Delegates—T. H. E. Bell, Reading.
Alternate—O. G. McFarland, Montgomery.

Dues for County and State Societies of \$4.50 each were paid by Drs. McFarland, Frankhouser, Bower, Bell and Fenton.

D. W. FENTON, Secretary.

Book Reviews

LABORATORY METHODS OF THE UNITED STATES ARMY. Office of the Surgeon-General. Lea & Febiger, Philadelphia. Price, \$1.50.

This is the sixth Medical War Manual that sets forth in practical detail the laboratory methods employed in the army. It is of the convenient pocket size and will be found to be of untold value to the doctor at home as well as officers of the Reserve Corps.

LESSONS FROM THE ENEMY. How Germany Cares for Her War Disabled. J. R. McDill, M.D., F.A.C.S. Price, \$1.50. Lea & Febiger, Philadelphia.

This is the fifth War Manual and sets forth the author's observations during his service in the Hun country before our entrance into the war.

THE WAY OUT OF WAR. Notes on the Biology of the Subject. Robert T. Morris, M.D., F.A.C.S. Doubleday, Page & Co., New York.

Received.

MODERN OPERATIVE BONE SURGERY WITH SPECIAL REFERENCE TO THE TREATMENT OF FRACTURES. Charles Jeorger Geiger, M.D. 120 Illustrations, cloth, 286 pp. Price, \$3.00. F. A. Davis Co., Philadelphia.

A splendid presentation of the operative technic for the open treatment of fractures. There is here

collected the accepted methods of dealing with the various forms of bone trauma and the presentation is clear and practical. This is a welcome work upon the subject for it suggests the better way for surgical repairing of fractured bones.

CHEMICAL PATHOLOGY. Being a Discussion of General Pathology from the Standpoint of the Chemical Processes Involved. By H. Gideon Wells, Ph.D., M.D., Professor of Pathology in the University of Chicago, and in Rush Medical College, Chicago. Third Edition, Revised and Reset. Octavo 707 pages. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$4.25 net.

Received.

A TREATISE ON CLINICAL MEDICINE. By William Hanna Thompson, M.D., LL.D., formerly Professor of Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College; Ex-President of the New York Academy of Medicine, etc. Second Edition Revised. Octavo volume of 678 pages. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$5.50 net.

Received.

DIFFERENTIAL DIAGNOSIS. Presented through an Analysis of 317 cases. By Richard C. Cabot, M.D., Assistant Professor of Clinical Medicine, Harvard University Medical School. Volume 2, Second Edition. Octavo of 709 pages, 254 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$6.00 net.

This second edition includes new text on arteriosclerosis vertigo, shell shock, gall-stone disease, gall-bladder, appendicitis and some additions to the chapters on heuratesis, glands, fainting, pallor, palpitation, tremor, ascites and abdominal enlargements.

One who possesses the first edition will appreciate this increased value of the text. To the reviewer the work is one that needs must find a place in every physician's library. It is one of the essential texts of the present time. It helps immensely to solve the difficult problems of practice. We commend the work most highly.

MEDICAL SERVICE AT THE FRONT. Lt. Col. John McCombe, C.A.M.C. and Capt. A. F. Menzies, M.C., C.A.M.C. Illustrated. Pocket series. Price \$1.25. Lea & Febiger, Philadelphia.

This volume admirably sets forth the methods and arrangements for the care of the sick and wounded at the front. It describes fully the handling of the wounded up to and through the evacuation hospitals. It is based on the author's personal experience. It is a means of acquiring intimate insight as to the duties that will be required of our own medical officers. We commend to all our members in the service this volume.

A TEXT-BOOK OF OBSTETRICS. By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania. Eighth edition, revised and reset. Octavo of 863 pages, with 715 illustrations, 38 of them in colors. Philadelphia and London: W. B. Saunders Company. 1918. Cloth, \$5.00 net.

The fact that this book has gone through eight editions is sufficient evidence of its popularity to rank it as one of the classics of medical literature. The merit of the book, however, especially in its present form, does not rest entirely upon the authority of Dr. Hirst as an obstetrician and gynecologist. A scholarly and well written treatise is desirable in any form but when such material is gotten up in the easily readable manner of this one with the well chosen topic heads and the truly beautiful and highly instructive illustrations, it becomes very valuable as a text and ready reference.

THE NERVOUS SYSTEM AND ITS CONSERVATION. By Percy G. Stiles, Assistant Professor of Physiology in Harvard University; Instructor in Boston School of Physical Education. Second edition, revised. 12mo. of 240 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$1.50 net.

While this book is written more particularly for the university student the practitioner will find many points of interest in it. The first ten chapters deal with the elements of nervous anatomy and physiology. Only the barest essentials of anatomy which are necessary to the understanding of physiological principles are considered. The physiology is touched on again only sufficiently to show the student the conceptions on which the principles of mental hygiene are based and to make him familiar with the terms used in the discussion of mental and nervous phenomena. The medical man will be interested chiefly in the latter chapters of the book which deal with the subjects of mental habits, emotions, sleep, causes of nervous impairment, effect of drugs such as caffeine and alcohol on the nervous system, etc. The author has enriched the psychology of Wm. James by many interesting observations of his own. In fact, there is much in his style to remind one of the clear, concise writings of that real American scholar.

Miscellany

Misbranded Nostrums.—The following are some "patent medicines" which the federal authorities held to be sold under false claims: Ascatco, containing 13 per cent. alcohol and some opium. Mexican Oil, containing over 57 per cent. alcohol, together with essential oils, glycerin, red pepper, eucalyptol, menthol and a small amount of opium alkaloids. Persil, containing 40 per cent. alcohol. Though claimed to contain, in addition, asparagus, parsley, celery, buchu, and juniper berries, it contained no appreciable quantities of celery, buchu,

juniper, asparagus or parsley. Dr. D. Kennedy's Favorite Remedy, containing 18 per cent. alcohol, nearly 50 per cent. sugar, and over 4 per cent. potassium acetate, with methyl salicylate, aloes, licorice and oil of sassafras. Our Standard Remedy, tablets containing rhubarb, senna, scoparius, licorice, red pepper and some ammonia compound with indications of aloes. Dr. King's Throat and Lung Balsam, claimed to relieve coughs and colds and consumptive patients in the last stages of the disease. "White Pine Expectorant and White Pine Balsam" (Allan-Pfeiffer Chemical Co.), a syrup containing alkaloid (probably morphin), chloroform, alcohol, benzoic acid and plant extract, but no extract or tar of white pine. California Tuna Tonic Tablets, pills containing iron carbonate and a small quantity of nux vomica alkaloids (strychnin, etc.) Alorine Antiseptic Suppository, containing quinin sulphate, boric acid and tannic acid. St. Joseph's Quick Relief, containing 32 per cent. alcohol with Peru balsam, camphor and red pepper. "Andrews' Wine of Life Root or Female Regulator," containing over 14 per cent. alcohol, sugar, methyl salicylate and tannin. "Andrews' Wine of Life Root Annex Powders," composed of sodium chloride and sodium bicarbonate, with a small amount of sodium carbonate. Clark Stanley's Snake Oil Liniment, a light mineral oil mixed with about 1 per cent. of fatty oil, red pepper and possibly a trace of campher and turpentine. (*Jour. A.M.A.*, April 20, 1918, p. 1183).

Neurosine and the Original Package Evil.—Neurosine advertisements ask that only original bottles of Neurosine be dispensed when physicians prescribe the nostrum. The reason is obvious: the bottle has the name blown in the glass and thus is an invitation to the patient to purchase more on his own initiative and also to recommend the preparation to his friends. The danger to the public from the self-administration of mixtures of bromides, such as Neurosine, is obvious. Neurosine is said to contain potassium bromid, sodium bromid, ammonium bromid, zinc bromid, extract of lupulin, fluidextract cascara sagrada, extract of henbane, extract of belladonna, extract of cannabis indica, oil of bitter almond and aromatic elixir. This chemical blunderbuss has been advertised for use in insomnia, hysteria, neurasthenia, migraine, etc., etc. It has also been recommended for children suffering from chorea. In all the years that Neurosine has been exploited to physicians with such remarkable claims, we have never seen a report of a careful clinical study in which the product has been used under the conditions which scientific investigation demands. (*Jour. A.M.A.*, April 27, 1918, p. 1251).

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVII

GRAND RAPIDS, MICHIGAN, JULY, 1918

No. 7

Original Articles

SOME INTERESTING SURGICAL CONDITIONS OF THE KNEE JOINT.*

R. C. ANDRIES, A.B., M.D., F.A.C.S.
DETROIT, MICH.

Surgery of the knee joint is a subject far too broad and too extensive for consideration at this time. A short paper must necessarily have a narrower issue. It must be limited to certain aspects of joint disease. Accordingly, I have chosen those conditions of the knee joint in which the presence of foreign bodies is either the sole factor, or at least, forms a very important part in the causation of the knee joint symptomatology. Internal derangements of the knee joint is another term often applied to these conditions. They are infrequent, and usually appear in otherwise healthy individuals; yet, from time to time, they are very troublesome, interfering with necessary exercise, and even with earning a livelihood. The very fact that they are often not totally disabling to the patient accounts for the carelessness and indifference with which they are at times treated.

Since the days of John Hunter, 150 years ago, numerous articles on derangements of the knee joint have appeared in literature. Of late years, except in technic of operations for these conditions, nothing new has been added; nor is it possible for me to add anything new or startling. I wish merely to call attention to a few points which should differentiate these curable conditions from the great mass of knee joint affections, which, if treated early, will prevent many a knee from becoming the seat

of a pathological process, beyond the repair of either medicine or surgery.

The knee joint is the largest joint in the body. Besides mobility, it must have considerable strength. The hip, too, requires considerable strength, but here, the bony conformation adds greatly to the stability of the joint. In the knee, the bones do not afford much stability, but the joint depends on the ligamentous structure for its fixity. Muscles and tendons do not aid materially. Anything, therefore, which interferes with the ligamentous morphology will necessarily hinder locomotion.

Besides the ligaments, the menisci or semi-lunar cartilages are an important factor in the function of the knee joint; they are really similar in structure and function to the glenoid and cotyloid ligaments that enlarge and deepen the articular surface of the shoulder and hip joints, respectively. They differ in that they are attached to the lateral ligaments of the knee joint, and are only loosely bound to the margin of the tibia. Normally they move upon the surface of the tibia to a range of about 1 cm, or less than one-half inch. In the movements of flexion and extension the menisci also change in contour, becoming longer and thinner in full extension, and correspondingly shorter and thicker in flexion.

The loose or floating bodies which appear in large joints, and especially in the knee joint, are classified differently by various authors. The prognosis will naturally depend upon a clear conception of the variety of loose body. Accordingly, the differentiation must be made, whether the loose body is the result of disease or trauma. In the majority of cases we must be directed to a great extent by what we are told. A precise history is important.

Considering, first, the diseases that are prone

*Read before Section on Surgery, 53d Annual Meeting, M.S.M.S., Battle Creek, May 8, 1918.

to produce loose bodies in the joint, the classification may be made as follows:

First. Tuberculosis in or near a joint, with its fibrous exudate developing later into multiple fibrino-cartilaginous bodies, commonly called rice bodies.

Second. Syphilis, with its gumatous formations, producing a specific proliferative osteo-arthritis; particles of the proliferating masses becoming detached, usually by slight trauma.

Third. The non-tubercular arthrocathies; such as ulcerative, formative, or fungating arthritides, attacking either the articular cartilages, or the synovial lining. In the later case, they will produce thickenings in the folds and fringes of the synovia, and later chondrification, and even ossification. These thickened portions of the synovial fringes remain attached as a pedicle, or by slight twists or trauma, become separated and in either case act as foreign bodies.

Secondly, in the foreign bodies that are purely the results of trauma, the following classification may be made:

First. The accretion cartilage, which begins as a separation of a fold of serous membrane, or a small fragment, increasing in size from the nourishment it receives from the synovial fluid.

Second. A fragment of articular cartilage, fairly large in size, is torn, or broken off, from the condyle of the femur, by direct violence.

Third. An attached portion, either of the synovial membrane or of fibrous tissue becomes traumatized, and without an infective process, increases in size, but remains attached.

Fourth. Fracture or luxation of the semi-lunar cartilages. These luxations and fractures are more frequent in the internal than the external cartilage, the proportion being about 92 per cent. in the former to only 87 in the latter.

Several anatomical reasons can be given for the more frequent injury to the internal semi-lunar cartilage. The internal semi-lunar cartilage has a very close connection with the capsule and internal ligament; the external semi-lunar cartilage has no relation with the

external ligament and its connection to the capsule is very loose. Neither cartilage is very closely adherent to the tuberosities of the tibia.

Keeping in mind these anatomical attachments, we must remember that the knee joint is not merely a hinge joint, permitting only flexion and extension, but is capable of abduction, adduction and rotation. These latter movements are most pronounced at flexion from 30 to 90 degrees.

With these anatomical and physiological facts, we can readily understand how, in a sudden over-rotation of the tibia on the femur, in a flexed position, a tear of the external semi-lunar cartilage would not likely take place, but in a majority of cases, a stretching of its rather loose attachments; while the same force directed towards the internal semilunar cartilage would, on account of its firmer attachments, produce either a tear, a split, a fracture, or a luxation. The semilunar cartilages, being thrust towards the center of the joint and gripped between the articular surface of the femur and the upper surfaces of the tuberosities of the tibia, produce the locking of the joint that makes the tear possible.

The symptoms produced by these foreign bodies, whether their presence is due to trauma or disease, are similar. A sudden sharp lancinating pain appears, accompanied, in some cases, by nausea, vomiting and faintness, followed by inability completely to extend the tibia on the femur. Then, usually, after some manipulation, extension is again possible, pain subsides, but tenderness and weakness, together with swelling and enlargement of the joint persists. The duration of the symptoms will depend upon the severity of the trauma produced by the sudden locking of the joint. In severe cases, the synovitis may persist for one or two weeks, while in mild ones, it may not appear at all, or, at best, be very short lived.

These symptoms all disappear, only to reappear at the next attack of "locking of the joint," when the foreign body, through some twist of the leg, such as in striking the toes against some object when the leg is partly flexed, stumbling, turning suddenly in bed, or

the like. The subsequent attacks may be very slight, there may be only a click or a snap, then a momentary locking, suddenly another click or snap, and almost full function is restored to the knee.

It is precisely this repeated and continuous appearance of symptoms, these successive attacks of synovitis, and the added damage produced in the articular and peri-articular structures by each subsequent attack, that brings out the imperativeness and necessity of some form of treatment which will cure the condition permanently, and render further attacks, with their accompanying pathological changes impossible.

As mentioned above, the knee joint depends for its stability principally upon its ligamentous structure. Repeated synovitis with effusion into the joint causes a stretching of the synovial sac and its incorporated ligaments. This repeated and continuous stretching appearing again and again, year after year, finally causes a laxness, increases lateral mobility, produces over extension, and as a result, the joint becomes less and less stable, with progressive impairment of function.

The fact that the diagnosis depends upon the etiology of the foreign body, has already been alluded to. In the case of foreign bodies solely due to trauma, a good prognosis, even 100 per cent. cures can be expected. Whereas, foreign bodies due to disease may be, and usually are, secondary. In these cases, the prognosis is not so good; nevertheless, *per se*, they should demand attention. For instance, a patient complaining of pain and "catching" in the knee joint, a loss of stability in slow degrees, a gradual appearance of soreness, occasional shooting pains in the lower limbs, and, upon examination, shows evidence of sensory disturbance, a hypermobile painless joint, together with a history of lues, that patient has foreign bodies which are secondary. In all probability he has a "Charcot's Joint." If, in a joint of this kind, the symptoms of acute synovitis caused by the foreign body are frequently repeated, attention should be directed to their removal.

Foreign bodies in the knee joint, especially

if due to disease, produce a sort of vicious circle. In the first place, they are caused by an arthritis of some kind, and in the second place, they themselves keep up, or even cause the arthritis. In knee pathology the sequence of events is usually as follows: first, trauma, which in healthy joints causes a laceration of luxation of a semi lunar cartilage, a breaking off of a piece of articular cartilage of either condyle, etc., and, in diseased joints, a severing of a piece of thickened synovial fringe, or a separation of an osteophitic growth; secondly, as a result of the irritation by the foreign body from whatever cause, a chronic traumatic synovitis usually develops, the pathological picture of which is a thickening, later, a chondrification of the capsule, and even an ossification of the synovial fringe of the capsule.

The recurrent trauma produced by the "catching" of the foreign body causes a congestion, a stiffening of the joint, an edema of the villi of the synovial fringe. In time, the thickened villi becomes cartilaginous, in turn they themselves break off, and form newer and more numerous foreign bodies, and afford additional sources of trouble. In this manner, a foreign body in a healthy joint will set up a chronic arthritis, and in a diseased joint, it is, in many cases, the etiologic factor which keeps up the arthritis.

Treatment. In purely traumatic bodies, there is but one form of successful treatment, namely, early surgical removal.

In the case of foreign bodies due to disease, surgical removal is very often the best course to pursue, especially if the joint locking occurs frequently, and each time brings forth a fresh effusion into the joint. In these cases appropriate treatment for the underlying cause is, of course, essential. A preliminary X-ray, to determine the extent of changes in the articular structures should never be neglected. Early cases, with little or no thickening in the synovial memberane, are best treated by a preliminary injection of a 2 per cent. Solution of Formalin in Glycerine, after the method of the late John B. Murphy. The benefit of this procedure lies in the fact that it will increase the

resistance of the joint to infection by causing an active leucocytosis, a "cofferdamming" of the lymph spaces. In long standing cases, where there is considerable thickening of the synovial membrane, this procedure is not necessary.

If possible, the foreign body should be located; it can then be transfixed with a needle and removed under local anesthesia. If this is impossible, the joint must be opened freely. Under the strictest aseptic precautions, a longitudinal incision, lateral or medial to the patella, is made, the joint opened and explored. A good view of the semi-lunar cartilage on the side of the incision is at once obtained, and any abnormality can at once be seen.

In some cases the whole anterior part is loose. A tongue shaped piece may be detached and turned inwards; the cartilage may seem normal, but can be made to move abnormally forwards and backwards. If the cartilage is at fault, it should be entirely removed, as partial ablation is often a cause for the recurrence of symptoms. If the semi-lunar cartilages are normal, some other cause for the symptoms must be sought. In many cases, enlarged and chondrified tags of the synovial fringe are found, which must be excised. If the fringe is normal, a fracture of the articular cartilage of the femur may be the cause, especially in front, as evidenced by a loose or missing piece of cartilage, displaying the bony surface of the femur; one or two loose bodies may be seen in the inter-condyloid notch, or by external manipulation may be squeezed from the sub-crural pouch. If one body is found, a search should always be made for others, as neglect of this precaution might cause a recurrence of symptoms.

Manipulation and undue irritation by frequent sponging, long exposure, and above all, the escape of blood into the knee joint, must be scrupulously avoided. This can be prevented by the proper application of a tourniquet, which should be left constricted at least until the capsule is accurately sewn with continuous fine catgut. It is unnecessary to introduce anything but sterile instruments into the joint cavity.

With proper attention to technic there should

be no untoward effects. The function of the patient's knee joint should be restored to its original firmness and stability.

REFERENCES.

- Rowlands, R. P. Operation for Loose Semi-Lunar Cartilage. *Lancet*. 1917, 1, 877.
- Graham, D. Semi-Lunar Cartilages Displaced, *Massage, Kinesitherapy and Bandaging*. N. Y. Med. J. O. V., 1130, 1917.
- Power, D. A. The record Hunterian Lecture on the Results of the Surgical Treatment of Displaced Semi-lunar Cartilages of the Knee. *Brit. M. J.*, 1911, 1, 407.
- Aitken, R. Y. Surgical Treatment of Displaced Semi-lunar Cartilages of the Knee. *Brit. M. J.*, Bond, 1911, 1, 401.
- Murphy, J. B. Floating Cartilage, *Surgical Clinic*. Chicago, 1913, II, 53-57, 1 pl.
- Brachett, E. G. and Osgood, R. B. The Popliteal Excision for the Removal of "Joint Mice" in the Posterior Capsule of the Knee Joint, a Report of Cases. *Boston, M. & S. J.*, 1911, CIXV, 975, 1 pl.
- Chandler, G. Treatment for Slip-meniscus. *J. Am. M. Ass'n.*, Chicago, 1911, IVII, 1452.
- Strays, E. W. Manipulative Treatment of Loose Cartilage of the Knee Joint. *Brit. M. J.*, 1911, I, 1050.
- Henderson, M. S. Loose Bodies in the Knee Joint. *Am. J. Orthop. Surg.*, Boston, 1916, XIV, 265-280.
- Whitman, R. Treatment of Unstable Semi-lunar Cartilages of the Knee Joint. *Med. Rec.*, N. Y., 1916, XC, 145-147.
- Murphy, J. B. Foreign Bodies in the Knee Joint; Arthrotoomy; Ablation; Chronic Synovitis; Resection of Synovial Membrane. *Surg. Clin.*, Chicago, 1915, IV, 1237-42.
- Barkley, A. H., and Herring, H. G. Report of Cartilaginous Bodies in the Prepatellar Space. *Lancet-Clinic*, Cincinnati, 1914, CXI, 262.
- Griehenow, F. F. Fractures and Dislocations of Semi-lunar Cartilages. *Journal-Lancet*, Vol. 37, p. 214, April 1, 1917.
- Whitlock, R. H. A. Loose Bodies in the Knee, with Special Reference to Their Etiology and Growth. *Brit. J. Surg.*, London, 1914, I, 650-664.
- Deankly, E. What is a Loose Semi-lunar Cartilage? *Lancet*, London, 1912, II, 1242.
- Brooks, O. D. Floating Cartilage of the Knee Joint. *J. Mich. M. Ass'n.*, 1913, XII, 307-309.
- Thomas, T. T. Multiple Movable Bodies in the Knee Joint. *Amer. Surg.*, 1917, LXV, 510, 1 pl.
- Blakeway, H. Joint Mouse of Left Knee Joint, *St. Barth. Hospital Rep.*, 1910, London, 1911, XVI, 189.
- Troell, A. Zur Kenntnis der Entstehung von freien Korpem im Kniegelenk mit Besonderer Rucksicht auf die sogen. Osteochondritis Dissecans. *Arch. F. Klin. Chir.*, Birl., 1914, CV, 399-417.
- Blecher. Ueber die seitliche abreissung der Menisken *Deutsche Ztschr. f. Chir. Seitz.*, 1913, CXXIII, 601-7.
- Beecher. Ueber die.
- Smith, S. A. Loose Bodies in the Knee Joint. *Canada M. Ass'n. J.*, Toronto, 1914, IV, 209-215.
- Rollett, P. Corps Etranger De Larticulation due Genou. *Lyon Med.*, 1915, CXXIV, 331.
- Minett, P. F. Exploration of the Knee Joint for Loose Cartilages. *J. Roy. Nav. M. Serv.*, London, 1916, II, 345-347.
- LeWald, L. T. Joint "Mouse" in the Knee Joint, Demonstrated by Roentgen Examination. *Am. Atlas Stereoroentgenol.*, Troy, N. Y., 1916, I, 64-67.
- Henschen. Fall von Peri. Arthritis Humeroscapularis. *Cor. Bl.f. Schweiz. Aerzte*, Basel, 1915, XIV, 504.
- Fall von Gelenkmausen in Belden Kniegelenke. *Ibid.*, 506.
- Gauthier, A. Corps Etranger Osteo-Cartilagineux due Genou. *Soc. de Med. Mil Franc.*, Bull. Par., 1914, VIII, 474.
- Ohritien. Corps Etrangers Articulaires du genou.; extirpation. *Polton Med.*, Poltters, 1913, XXIII, 147.
- Jacoboiel, An Intra-Articular Foreign Body in the Knee, *Spitalul, Bucuresti*, 1912, XXII, 181, 183.
- Bonneau, R. Arthrotomic du Genou Pour Arthrite Septique par Corps Etranger (Aignille). *Paris Chirurg.*, 1913, V, 452.

- Fauntleroy, A. M., and Schmidt, L. M. Loose Bodies in the Knee Joint, with Report of Two Cases. U. States, Nov. M. Bull., Wash., 1913, VII, 110-113, 2 pl.
- Cretren. Corps Etrangers Articulaires du Genou et Extripation. Arch. Prov. de Chir., Paris, 1913, XXII, 466.
- Beckham, F. E. Wrenched Knees and Slipped Semi-lunar Cartilages. Providence, N. J., 1913, XIV, 11-15.

THE RELATION OF THE MEDICAL PROFESSION TO THE MUNICIPALLY CONTROLLED MEDICAL SCHOOL OF DETROIT.

ANDREW P. BIDDLE, F.A.C.P.,

President pro tem., Board of Education of the City of Detroit.

It is hardly necessary and perhaps not wise to enter here into a discussion of the years of controversy and of the earnest efforts—to date unfruitful—of the many able leaders and thinkers of the profession to locate the clinical teaching of the Medical and Surgical Departments of our great University in the heart of the State's greatest clinical centre. What was true a half century ago, when this effort was begun, is tenfold truer to-day. The best clinical teaching, other things being equal, must find its place in the richest field of clinical supply. The problem is to co-ordinate the material and to put the teaching on a plane demanded by the highest interest of the profession and the public. To neglect at this time of national crisis the clinical advantages for teaching purposes of a city of 800,000 or more with its vast emergency and industrial fatalities and its well established hospital facilities would be suicidal to the interest of the profession and criminal to the demands of this and the war torn countries of Europe.

The army and navy have taken and will take for some time the largest percentage of our graduates; the supply, were every reputable school in full operation, cannot and will not for many years meet the demand of the civilized world for educated physicians. In spite of this urgency a few medical schools must go to the wall for lack of funds to meet the increased cost of medical education. Those which survive will do so because of previous endowment, state or municipal aid. Fortunately, the City of Detroit has through its officials recognized the debt it owes to our soldiers, to

its own population and to the world at large and has without a dissenting voice approved of the budget submitted by the Board of Education for the maintenance of the Detroit College of Medicine and Surgery during the coming fiscal year, the same to be under the control of the said Board; and the latter has accepted the offer of the Trustees of the Detroit College of Medicine and Surgery and will on July first of this year lease from the Trustees for the sum of \$1.00 and other considerations all the real estate, buildings and good will of the College and from said date take full charge of its educational and financial systems.

Thus with the coming of July will the great metropolitan city of the state undertake the education of the students through his premedical, collegiate and medical years, and, if experience shall have proven the wisdom of the course, it takes but little foresight to see herein the entering wedge for a great Municipal University, so sorely needed for the thousands of our boys and girls, who would eagerly grasp the opportunity of higher education, were it within the financial reach of their parents. To deny this is not to know their needs and their ambition.

The Board of Education of the City of Detroit is composed of seven members, elected at large on a non-partisan ballot. It controls the whole educational system of the city. If the great University of Michigan has prospered under the guidance of a Board of Regents elected on the partisan ballot and has remained free from political chicanery and influence, is it not possible to believe that as at present constituted the Board of Education of the City of Detroit will be free of this baneful influence? Cannot its citizens look with assurance to the fact that the Board will be true to the principles upon which it was created, the foremost of which is the cardinal one of superintending and furthering the educational interests of its boys and girls without fear or favor? If this be true, then the College belongs to the Citizens of Detroit and this new problem of medical education belongs as much to every member of the medical profession both of the city and of the

state as it does to the Board of Education. His voice should be heard, his influence felt. The active co-operation of every hospital of the city with its rich clinical resources is not only welcomed, but in the name of scientific medicine expected. The "after the war" problems are great and serious enough to engage the attention of us all. The establishment of a municipally controlled medical school in the City of Detroit will at once elevate its standard to the plane enjoyed by the other educational systems and in no way hamper the excellent work of the Department of Medicine and Surgery of the University of Michigan. Neither school can furnish the normal supply needed in Michigan alone, so there are work and glory enough for both. If it does anything, even if the Board of Regents sees fit to enter the Detroit field, it can be only a stimulus to each. So in the interest of medical education and in the name of humanity let the one supplement the work of the other and be rival only for the opportunity of greater service.

SEVERED RIGHT FEMORAL ARTERY.

DONALD L. STILWELL, M.D.

DETROIT, MICH.

History.—G. S. American, age 23, single, male, machine hand. Injured July 18th, 1917, 4:30 P. M. While brazing a pipe for the front spring of an automobile he was using two acetylene torches. In some unknown manner an explosion occurred and the pipe and the plug he was brazing into its end were forcibly thrown against his right groin. He was not knocked down and says he experienced no particular pain at the moment. However he soon noticed a numbness of the whole right leg. A physician was called from the neighborhood and rendered first aid. He reached the hospital by ambulance some twenty minutes after his injury. He was immediately seen by the writer.

Examination.—Examination disclosed a hematoma of the right inguinal region, the size of a large grape fruit and just below Poupart's ligament. Over the center of this was a small circular gauze dressing the size of an eye pad, and held in position by two small adhesive straps. When this was removed a puncture wound was seen which might admit the small blade of a pen knife.

On admittance, the patient was complaining that the right leg was paralyzed and that the plantar

region was very hot. His clothing was cut off and the region shaved and cleansed with benzine and painted with iodine. During the cleansing a portion of the clot was ejected from the small puncture wound. Immediately profuse hemorrhage ensued. Pressure was made on the proximal end of the artery against the pubic ramus. The patient was showing severe symptoms of shock and hemorrhage. While the anesthetic (nitrous oxid-oxygen) was being administered 750 cc. of normal saline was being given by hypodermoclysis. Of course compression was maintained on the artery, a tourniquet being impossible.

Operation.—An incision was made over the femoral course from the lower edge of Poupart's ligament a distance of four inches. The enormous blood clot was scooped out with the left hand and dissection made easily down to femoral artery with the fingers. The wound was mopped out disclosing complete severance of the femoral one-half inch below Poupart's. The proximal end was securely clamped with a heavy hemostat and then the distal end. There was slight oozing from the tissues, probably from non-removed portions of the clot. The wound was dried, the proximal end of the artery was well exposed and ligated with kangaroo tendon, the stitch including muscle on either side thus burying the ligated artery in muscle. The distal end was ligated likewise.

The site was observed for a period and no further hemorrhage appearing, the wound was closed with interrupted sutures of No. 2 catgut and retention sutures of silkworm gut and skin clips between. Drainage was provided. Dry dressings.

Post Operative Course.—At the conclusion of the operation the right leg was very cold and cyanotic. Pulse 96. He was put to bed and hot water bottles placed about him. He was given one-sixth of morphine. Before midnight, the leg became warmer and better color. Patient comfortable and slept fair.

The next day the leg was warm and of good color, the collateral circulation having been established. The wound was dressed on the third day and was clean. On the 8th day, all stitches were removed. Wound clean. On the 9th day patient was up in a wheel chair. August third, allowed crutches.

Recovery uneventful. August 10th, walked without aid of crutches. August 13th, out of doors. August 23rd, discharged cured.

X-ray on July 27th eliminated the possibility of severance by retained foreign body.

484 E. Jefferson Ave.

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

A. L. Seeley, Chairman Mayville
E. W. Toles Lansing
R. S. Buckland Baraga

EDITOR

FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
Grand Rapids, Mich.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

July

Editorials

THE NEED OF ORGANIZATIONAL COOPERATION.

We can reach but one conclusion in the ultimate analysis of the trend of events in so far as they pertain to the medical profession: The medical needs of our military forces and of our civic and industrial interests can only be solved and met by organizational co-operation and work.

The Surgeon-General has stated that the immediate needs of the army is 5,000 medical officers by July first and 2,500 per year thereafter for the duration of the war providing our military forces did not exceed three million men. If the exigencies of the war caused an increase of our army to four or five million men a heavier demand would be made for professional men to enter active service.

The Surgeon-General has also expressed the desire that communities and industries be not deprived of necessary medical and surgical protection. In presenting this need the Surgeon-General has stated that he believed that medical officers could be best obtained and the interests of communities and industries safeguarded by the assumption of this work by the American

Medical Association and its constituent organizations.

Therefore in responding to the call of the Surgeon-General and in assuming the responsibility he has placed before us there is called forth the cooperative strength of our State Society. To acquit ourselves of this work it becomes imperative that each component county society likewise awaken to the realization that the needs of our country demand their organizational cooperation.

To supply the men and to protect the home interests two essentials are paramount. The first is a survey of our professional resources; the second the determining of community and industrial needs.

A survey of every physician of the state is being made. Information is also being secured as to the number of people in each county and what their needs are as to medical and surgical attention. The requirements of industries are also being tabulated. It is intended that we shall have accurate, reliable information on all these subjects, with that information at hand it will be then possible to determine what men can go, what communities and industries can spare these men and what procedure had best be observed in filling out our quota of medical officers.

It must at once become apparent that such a method for the handling of this call is both sane, logical and efficient. Therefore, we are placing this vital problem before the profession and urge that those who have been called upon to execute the work be accorded organizational cooperation that is prompt and aggressive. Likewise do we appeal that personalities, petty spite and jealousies, fixed or fancied grievances, personal ambitions or avarices be suppressed, forgotten. There must be but one spirit—how best to meet the hour's need. Other influences must not be permitted to warp our judgment or lead us astray. There must be but one purpose—Supplying Our Country's Needs. With that spirit let us all bend to the work before us.

Just a word as to personal interests. If it is the conclusion of your associates that you can be spared do not indulge in further excuses

and objections. File your application promptly and arrange to go as speedily as possible. If you are eager to go, have been simply chafing to go and it is determined that you are needed at home resign yourself to that conclusion, dig in and whole-heartedly acquit yourself of the home duties that rest upon you. The man at home is just as much a hero as he who sees active service, providing the need of his remaining at home has been determined. In the end justice and sane judgement will conserve and recognize your right to credit for patriotism and devotion to duty. As ex-President Biddle well stated: "The duty of the hour is *service*." Service at home or in the ranks will be equally patriotic under this proposed plan. But woe betide him or her who under the guise of patriotism strives alone but for personal and pecuniary gain. He or she will sooner or later be exposed and then they will become bereft of all friendship or professional companionship. Pitiably will be their existence.

Medical Men of Michigan our task is before us. We *must* respond with our fullest organizational cooperation and effort.

PRESIDENT HUME.

Arthur M. Hume elected President at our 53d Annual Meeting scarcely requires any review of his activities in the professional and social life of this state. His career has been such that we are all familiar with his qualities as a man and likewise as a physician. We have all benefited by his work in organizational and political circles and our environments have been made the pleasanter by reason of the labor he has contributed in our behalf.

Deserving as he assuredly is of the office to which we have elected him and confident as we are that his activities while the incumbent of that office will more greatly endear him to the profession of Michigan we are going to content ourselves by presenting in tabulated form part of his personal history.

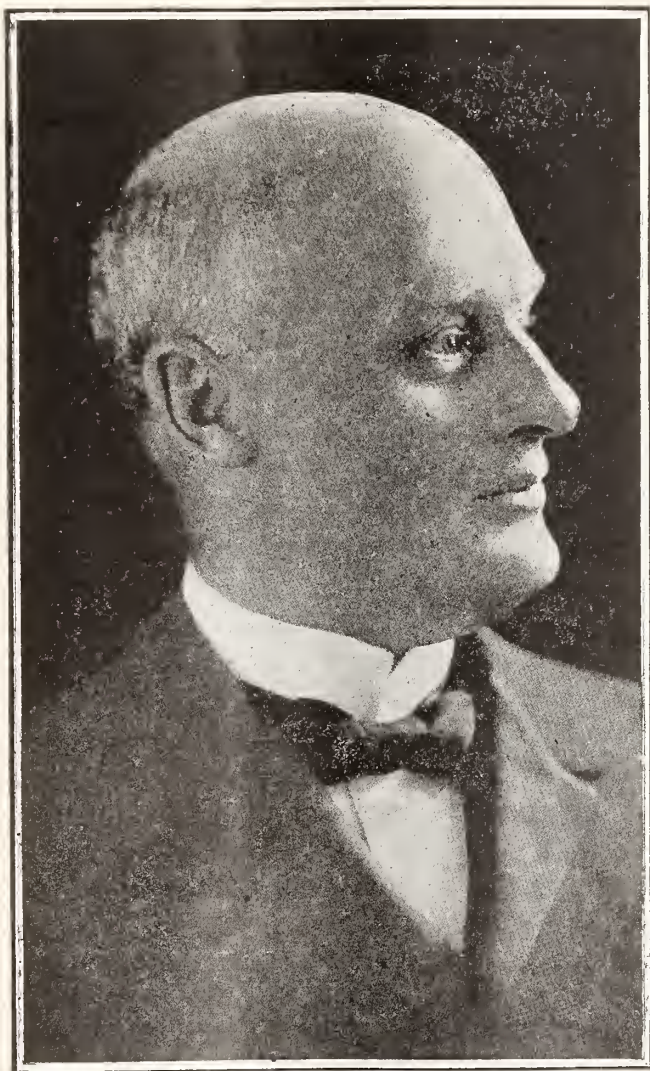
Born in Medina, Lenawee County, Michigan, July 16, 1859. Father, American of Scotch descent. Mother, born in England coming to

America in girlhood. Youngest of an "old fashion" family of nine. Attended common schools, later High School at Hudson, and Oak Grove Academy at Medina. Taught five terms in country school, the first when 16 years of age. Graduated in Medicine at Detroit Medical College, Class of 1881. Practiced at Bennington, Mich., about two and one-half years. Married in January, 1882, to Ida M. Norris of Bennington. Located in Owosso, October, 1883, in partnership with Dr. Jabez Perkins, an old practitioner and one of the most able physicians of Michigan. This association continued about twenty years until the death of Dr. Perkins. For several years Health Officer and President Board of Health of Owosso. Ten years member of Owosso Board of Education. In 1899 and 1900 Mayor of Owosso. From 1891 to 1899 a medical officer of Michigan National Guards and in 1898 Acting Brigade Surgeon at Island Lake during organization of Guards for Cuban service. Has been local surgeon of Ann Arbor and Michigan Central R. R.'s for many years, and Chief Surgeon Ann Arbor R. R. since 1910. For many years a member of the American Association R. R. Surgeons and of the National Association Railway Chief Surgeons. Active in Masonic work, Master of Owosso Lodge in '90, '91, '92 and '93. Grand Master of Masons in Michigan in 1909-10, and a 33 degree. Member of Congregational church, Owosso.

Two daughters, Ethel D. and Margaret A., and one son, Major (Dr.) Harold A. Hume with whom associated in practice from 1900 to 1916. At that time Dr. Harold went with his regiment (32d Mich. Inf.) for border service in Texas. Soon after his return in 1917 he was assigned to medical service in the office of the Adj. General at Lansing and is yet serving there.

Has been a Fellow American College Surgeon since early in its organization. Appointed a member of State Board of Registration in Medicine in 1911, and is now serving second term on that Board.

Became a member of the Michigan State Medical Society about 1883, and continuously



PRESIDENT ARTHUR M. HUME,
Owosso.

since. Always an active member of the old Owosso Academy of Medicine and of the later Shiawassee County Medical Society. By election as delegate became a Fellow of the A.M.A. about '87. Elected Councilor 6th District M. S. M. S., 1909, serving continuously to time of election to Presidency.

We pledge our President that as our head we will render unto him every support and assistance that he may require to further the effectiveness and influence of our organization.

THE A. M. A. CHICAGO MEETING.

In point of numbers and attendance at section meetings the Chicago meeting was a pronounced success. There was a pronounced spirit of patriotism that permeated the entire meeting. The many men in uniform gave a distinct military setting to every gathering. Nineteen different meetings occurred in the five days and 115 speakers were listed on the program. He who attended returned home conscious of the magnitude of the part that our profession is taking in the war.

There were no social features excepting the smoker given to the members of the House of Delegates by the Chicago Medical Society. The evening patriotic meetings were inspiring and crowded houses greeted the speakers. The distinguished guests from our Allied countries were deservedly honored by round after round of applause that greeted them.

The House of Delegates accomplished its work expeditiously. Much of it was routine in character dealing with annual reports of organizational activities. No radical legislation was enacted. An uncalled for effort to "oust" certain officers of the Association was frustrated. The "Martin Machine" sought to elect Martin as Secretary and by selecting new trustees place W. A. Evans of Chicago in the office of General-Manager and Editor. To attain that end they supported the candidacy of the Surgeon General of the Navy. It is regrettable that at this time the Surgeon-General of the Navy should have been made the "peace-maker" of these men. Dr. Lambert of New

York was elected by a vote of 60 to 57. Many of the delegates voted for Dr. Braistead because of being the Surgeon-General of the Navy and their support cannot be construed as supporting the "political aspirants" in their base attempts. Sustaining this defeat they did not undertake to place their other candidates in nomination. Atlantic City was selected as the place for holding the 1919 annual meeting. Michigan's four delegates were in attendance at all the sessions of the house. Our Delegate, Dr. Connor of Detroit, served on the Committee of Scientific and Section Work.

Michigan was well represented with 347 of our members present.

Editorial Comments

Chairman W. J. Kay of the Council has appointed the following Council Committee.

Finance—

Dr. C. T. Southworth, Chairman.
Dr. S. K. Church.
Dr. F. Holdsworth

County Societies—

Dr. G. L. Kiefer, Chairman.
Dr. F. C. Witter,
Dr. J. M. McClurg.

Publication—

Dr. A. L. Seeley, Chairman,
Dr. E. W. Toles,
Dr. R. S. Buckland.

The following pertinent extracts from President Bevan's annual address delivered at the A. M. A. meeting are so very pertinent that they bear repetition. In fact we recommend that every doctor in Michigan read the entire address:

THE COUNCIL OF NATIONAL DEFENSE—MEDICAL SECTION

The efficient organization of the medical profession of this country for war is being splendidly accomplished by the cooperation between the Medical Departments of the Army and Navy and the organized profession, the American Medical Association. It has been unfortunate that a medical advisory committee which is not in any way representative or democratic, and which has no proper function in the efficient organization of the medical profession for war, should have been called into existence. A small coterie of specialists, of gynecologists and surgeons, no matter how eminent or how successful they may have been as promoters

and exploiters of special medical societies, can in no way in this great emergency and in this great democracy represent the medical profession.

WAR ACTIVITIES.

As President of the Association, I desire to call the serious consideration of each county medical society to the fact that in order to do its duty it should furnish at least 20 per cent. of its members for military service. This situation should be met fully and promptly by each county medical society. In order to prevent hardships to communities due to lack of medical service, and in order to prevent the crippling of medical schools and hospitals, no community and no institution, unless it is clearly oversupplied, should be allowed to furnish more than 50 per cent. of its medical men. As far as possible the quota from each county should be filled by men under 45 years of age. If this is not possible, men up to 55 will be taken. As fast as each county fills its quota of 20 per cent.—and this should be done by each county within the next few months—the secretary of the county medical society should notify the secretary of the state medical association and the secretary of the American Association of that fact.

The demands made on the medical profession by the war are so great that it is evident that in order to secure the necessary number of medical men for the government, and at the same time prevent hardships in some communities and institutions, it is necessary to organize the entire profession of the country in a systematic way. It therefore became necessary for the American Medical Association, acting with the Surgeon-General's Office, to take a census of the available medical men in the United States in each state, in each county, in each medical school and in each hospital, and to attempt to secure from each one of these different units at least 20 per cent. of the medical men. This plan will enable the government to secure the necessary number of medical officers for an army of 5,000,000 men or more, and a navy of 1,000,000 without any great hardship to any community or to any institution. It is evident that a plan of this kind is absolutely essential, and it is the purpose of the American Medical Association through its county and state societies and its national organization to create such a systematic classification and secure the adoption of this plan. Such a plan means a voluntary draft to the medical profession by the profession itself. The medical profession will supply the men needed by the government. No conscription, no compulsion will be required.

Michigan now has a war committee in every county. The individual survey will be made just

as soon as instructions are received from Chicago. In the meantime we urge that every War Committee endeavor to secure as many enlistments in their county as possible. We are indeed confident that the work of securing the necessary men will be systematically undertaken. While the stars of our service flag are turning from blue to gold we must reaffirm our allegiance and pledge our all to the cause.

The wearing of a wrist watch is no longer an insignia of sissified degeneration. Many of us have always looked askance towards he who had adopted that method of carrying a time piece. We must re-adjust our views when we see men whom we have always looked up to with respect and esteem wearing wrist watches—and they are not all in the service either. Surely we must, to play safe, be ready to revamp many of our former opinions in this day of rapidly changing standards.

"Tonics and Sedatives" column in the A. M. A. Journal is edited by Dr. Fishbine of the Journal's editorial staff. Many of us have indulged in a hearty laugh while reading these quips. At times they are not so mirth producing and we have wondered why. We recently ascertained the reason—when the cards are running against one a sadness and gloom permeates one's mind and wit and humor forsake us. When we are winning, always holding the higher hand, and the pile of red, white and blue rise to form an impregnable barricade the reverse becomes true with a renewed keenness for humor and wit. Henceforth we will know how that Chicago game is running for we have an indicator in the "Tonic and Sedative Column." Yes we "sat in" *once*. The following issue was scintillating to the extreme.

If it were not for our advertisers the publication of *The Journal* would be impossible. To retain this patronage it becomes imperative that all of us confine our patronage, whenever possible, to those who advertise with us. We implore our members to support our advertisers. Now, if never before, send them your business.

We want every advertiser to renew his contract. We will not succeed in securing renewals if our members fail to make their advertising a good paying investment. Let's all boost for the next six months.

It's time to commence saving for the next Liberty Bond campaign. We must double our subscriptions. The more we purchase the sooner will the war end.

PROCAINE AND NOVOCAINE IDENTICAL.

To the Editor:

It appears that in certain quarters the attitude is taken that the local anesthetic sold as Procaine is not identical with that marketed as Novocaine. The Subcommittee on Synthetic Drugs of the National Research Council believes it important that this misunderstanding should be corrected and hence offers the following explanation:

The monohydrochloride of para-amino-benzoyl-diethylamino-ethanol, which was formerly made in Germany by the Farbwerke, vorm. Meister, Lucius and Bruening, Hoechst A. M., and sold under the trademarked name Novocaine, is now manufactured in the United States. Under the provisions of the Trading with the Enemy Act, the Federal Trade Commission has taken over the patent that gave monopoly for the manufacture and sale of the local anesthetic to the German corporation, and has issued licenses to American concerns for the manufacture of the product. This license makes it a condition that the product first introduced under the proprietary name "Novocaine" shall be called Procaine, and that it shall in every way be the same as the article formerly obtained from Germany. To insure this identity with the German Novocaine, the Federal Trade Commission has submitted the product of each firm licensed to the A. M. A. Chemical Laboratory to establish its chemical identity and purity, and to the Cornell pharmacologist, Dr. R. A. Hatcher, to determine that it was not unduly toxic.

So far, the following firms have been licensed to manufacture and sell Procaine:

The Abbott Laboratories, Ravenswood, Chicago.

Farbwerke-Hoechst Company, New York, N. Y.

Rector Chemical Co., Inc., New York, N. Y.

Calco Chemical Company, Bound Brook, N. J.

Of these, the first three firms are offering their products for sale at this time, and have secured their admission to New and Nonofficial Remedies as brands of Procaine which comply with the New and Nonofficial Remedies standards.

While all firms are required to sell their product under the official name "Procaine," the Farbwerke-Hoechst Company is permitted to use the trade designation "Novocaine" in addition, since it holds

the right to this designation by virtue of trademark registration.

In conclusion: Procaine is identical with the substance first introduced as Novocaine. In the interest of rational nomenclature, the first term should be used in prescription and scientific contributions. If it is deemed necessary to designate the product of a particular firm, this may be done by writing Procaine-Abbott, Procaine-Rector, or Procaine-Farbwerke (or Procaine "Novocaine brand").

Yours truly,

JULIUS STIEGLITZ, Chairman,

Subcommittee on Synthetic Drugs, National Research Council.

Headquarters Sanitary Squad No. 2,
39th Division, Camp Beauregard, La.

June 14th, 1918.

Dr. F. C. Warnshuis,

Grand Rapids, Michigan.

Dear Doctor:

I am taking the liberty of writing you a few lines in regard to the question of the relation of the men in the Medical Reserve Corps to the rest of the profession who are at home.

We all know, that is, those who are in the service, what has had to be given up in order that we may serve our country. We who are in the service are not really the ones who have had to sacrifice the most; it is our wives and families who have been called upon to do the real sacrificing. They have to get along without the things they have been accustomed to and in very many instances they have been compelled to give up their homes, because they could not afford to keep them up.

Very few, who are not in the service, know the expense incurred by an officer in properly equipping himself so as to satisfy the conditions laid upon him by the regulations of the Army. In the Army and Navy Register of February 23rd, 1918, on page 227, there is given by Senator Chamberlain, a list of the articles required and the minimum cost of the equipment required by each dismounted officer in the Army, as required by section 4, 'Regulations for the Uniform of the United States Army' (Special Regulations, No. 41), and 'Information as to Uniform and Equipment for officers in France,'

headquarters of American Expeditionary Forces, November 16th, 1917. This *minimum* cost amounts to \$646.90. By way of comment, will say, that the prices which are given on this list can rarely, if ever, be duplicated if the articles are bought in the towns near which the camps are located, at least this is the experience of the officers in the camps with which I have been connected.

The result of this is that if the officer buys this equipment, his family has to do without, in many instances, the necessities of life, if he tries to cut down on his equipment then he gets in bad, because he does not comply with the regulations. To overcome this condition many officers have to go on the outside and borrow money at a high rate of interest, to properly equip themselves thereby incurring a debt, which they will have to meet after they get back in civil life, or if they don't get back, it will have to be paid out of the insurance money which should go to their families.

Now the suggestion which I have to make is this, the State Medical Society through the County Societies, made an assessment on its members and I doubt if many of men in the service or their families have ever called upon the Society for help, because I do not believe that they are the class who will ever beg, they would rather make any sacrifice than to be dependent on the charity of others, even though the others might be profiting by their sacrifice. Why not use this money to loan to the men in the service who may need it, so that they can get their equipment as they ought to without having to deprive their families of the little that is theirs by right. Loan it to them without interest and give them the opportunity to pay it back, and it will confer a favor on a great many men who are earnestly trying to do not only their "bit" but their best and their all for their country, which all are willing to work for and many willing to die for.

I will appreciate hearing from you in regard to this and hope that you will give it your favorable consideration.

There are five Michigan men down here in the 39th Division, at Alexandria, La. They are: Major John T. Sample, Saginaw; Captain A. J. Schmalzer, Hillman, Montmorency County; Lieut. A. A. Hoyt, Battle Creek; Lieut. F. W. Wastell, Onaway, Presque Isle County; and my self from Bridgman, Berrien County.

I wish that you would also send me my copy of the Journal of the State Medical Society to my address down here, I would like to keep in touch with what is doing in the State.

With kindest regards and best wishes,

Yours very truly,

DAVID LITTLEJOHN,

Captain, M. R. C., U. S. Army. Commanding Sanitary Squad No. 2.

Deaths

Dr. E. T. Abrams.

WHEREAS, it has seemed wise in the sight of a Divine Providence to remove from our midst, Dr. E. T. Abrams, a charter member of the Houghton County Medical Society, and

WHEREAS, we appreciate in his demise a great loss to the community in which he was a loyal and patriotic citizen, an irreparable loss to the medical profession, of which he was an active and leading member, and a regrettable loss to the State at large which he has served faithfully as member of the Legislature and of the State Board of Health; therefore be it

RESOLVED, by the Houghton County Medical Society, that we express our grief at the departure of so esteemed a member of our profession, so noble a member of society, and so worthy a public servant of the State; and be it further

RESOLVED, that we extend to Mrs. Abrams our sincere and heartfelt sympathy in her bereavement.

Houghton County Medical Society,

D. E. GODWIN, Secretary.

State News Notes

The Special War Bulletin of the American and Canadian Sections of the International Association of Medical Museums is a most interest absorbing publication. Dr. Warthin of Ann Arbor is one of the editors. The pathological investigations, studies and conclusions are most important contributions to war literature and materially assist in solving many problems that confront the medical officers. The Bulletin contains 415 pages of the most recent

literature on these subjects. We urge that our readers secure this Bulletin.

Dr. Leo C. Donnelly of Detroit has been honorably discharged from the medical reserve corps on account of an acute infection of the nasal sinuses.

The Calhoun County Medical Society held their sixth regular meeting on Friday evening, June 7, 1918. Dr. Samuel Goodwin Gant of New York City addressed the Society on two subjects, 1. Ulcerative Colitis with Conservative and Surgical Treatment; 2. Local Anesthesia in Rectal Work.

Dr. H. D. Bars, instructor in Surgery at the University Hospital, has tendered his resignation and will go into private practice with Dr. T. J. Carney at Alma, Mich., on July 1.

The State Board of Health has elected the following officers: Col. V. C. Vaughn, M.D., re-elected president; Dr. Guy L. Kiefer, vice-president to fill the vacancy made by the death of Dr. E. T. Abrams of Hancock.

Major James T. Case, M.D., formerly of Battle Creek, has recently been appointed Director of Roentgenology of the American Expeditionary Forces. Major Case was recalled from France by the U. S. Government to take up matters pertaining to X-ray work and is returning to France in the capacity of this office.

Book Reviews

THE MEDICAL CLINICS OF NORTH AMERICA. Volume 1, Number 5. (The Chicago Number, March, 1918). Octavo of 241 pages, 35 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published Bi-Monthly. Price per year: Paper, \$10.00; Cloth, \$14.00.

THE SURGICAL CLINICS OF CHICAGO, Volume II, Number II (April, 1918). Octavo of 208 pages, 79 illustrations, Philadelphia and London: W. B. Saunders Company. 1918. Published Bi-Monthly: Price per year: Paper \$10.00; Cloth \$14.00.

INFECTION AND RESISTANCE. By Hans Zinsser, Professor of Bacteriology at The College of Physicians and Surgeons, Columbia University, and Bacteriologist to the Presbyterian

Hospital, New York; Major Medical Officers' Reserve Corps, U. S. A. Published by MacMillan Co., New York. Price \$4.25.

This is an exceedingly comprehensive book on the experimental data upon which the modern conceptions of infection and resistance to bacteria and their products are based. It is written from the standpoint of the laboratory scientist but, nevertheless, every fact and theory is given to full clinical significance. The student and clinician will no doubt find it a laborious task to follow all the historical data connected with the development of each theory and principle but the effort will be well worth the while in the increased understanding it will furnish in this very practical division of biology.

It is a source of great gratification in a volume of this kind to note what a large part American workers have had in the recent advances of this science.

A DIABETIC MANUAL. By E. P. Joslin, M.D., Assistant Professor of Medicine, Harvard Medical School; Consulting Physician Boston City Hospital; Collaborator to The Nutrition Laboratory of The Carnegie Institute. Price \$1.75.

As a scientific medical book designed for the use of the layman this work deserves to take its place along side of that of Brown on Tuberculosis. Both diabetes and tuberculosis are chronic diseases in which the intelligent co-operation of the patient with the physician has an important bearing on the outcome. It is a matter of regret, however, to the general practitioner that the patients who are intelligent enough to read and understand a book of this kind are not the ones with whom he has the greatest difficulty in teaching and controlling.

The public at large may deem itself fortunate that an authority of Joslin's standing has taken the pains to reduce the important facts of such an extremely technical subject to the ordinary expressions of every day life.

SYPHILIS AND PUBLIC HEALTH. By Edw. B. Vedder, A. M., M.D., Lt.-Col. Medical Corps, U. S. A. Published by Lea & Febiger, New York and Philadelphia.

The book is based on an extended experience in this work in army life together with four years of laboratory work on the subject, during which time the author had constant access to the Surgeon General's library. The list of authors referred to in the book includes one of the most comprehensive

reviews that we have on the literature pertaining to this subject.

A consideration of some of the pertinent facts contained in this modest volume will convince the physician of the great importance that an understanding of the social and epidemiological aspects of this disease must have to his own selfish, personal interests.

It is customary to look upon syphilis as a disease associated with sexual immorality. Consider a few of the facts gathered in Dr. Vedder's work: 20 per cent. of the case among women in Fournier's clinics were transmitted by husband to wife. In Fournier's private practice, 75 per cent. of the married women contracted the disease from their husbands. In certain communities of Russia, syphilis prevails in 90 per cent. of the inhabitants. Vedder collected eight reports on 331 pregnancies in 100 syphilitic families. Fifty-five per cent. of these died at or before birth. Thirty-five per cent. lived but were syphilitic. Aside from such modes of infection, reliable authorities hold that the number of infections occurring extra-genitally amount to from 5 to 10 per cent. of the whole.

Certainly the physician continually coming in contact with a disease of such ubiquity can not afford to remain in ignorance of its modes of transmission, infectiousness and prevention. Not only in a professional way but as an ordinary citizen his safety and that of his family is constantly menaced by the spread of what has properly been called The Third Great Plague.

In this respect we heartily endorse Dr. Vedder's book as the most exhaustive, concisely written, unprejudiced work of the present date.

PROPAGANDA FOR REFORM.

Mayr's Wonderful Stomach Remedy.—This is a "patent medicine" adaptation of the old "fake gallstone" trick, which consists of selling large doses of olive or other oil and a saline cathartic. The result of taking this combination is the passage of a number of soapy concretions which the victim is persuaded to believe are gallstones. In 1915 Mayr was convicted under the Federal Food and Drugs Act for making false and fraudulent claims for his "remedy." As the Food and Drugs Act applies

only to the packages of a preparation and not to store window displays and newspaper advertising, Mayr has revised the labels, etc., for his "patent medicine," but still makes misleading claims elsewhere (*Jour. A.M.A.*, May 11, 1918, p. 1393).

Cotarnin.—Cotarnin is an artificial alkaloid derived by oxidation from narcotin, by a process analogous to the derivation of hydrastinin from hydrastin (which again differs from narcotin only by an addition OCH-3 group). Cotarnin hydrochlorid is marketed as stypticin, and cotarnin phthalate as styptol. Cotarnin is used systematically mainly against uterine hemorrhage, especially in menstrual hemorrhage, endometritis and congestive conditions. It is ineffective against postpartum hemorrhage or bleeding from gross anatomic lesions, and probably also against hemorrhage in other internal organs. Local application of cotarnin in substance or concentrated solution has a direct vasoconstricting effect and is used in tooth extractions, epistaxis, etc. (*Jour. A.M.A.*, May 11, 1918, p. 1396).

Syphilodol.—According to the French Medicinal Company, New York, Syphilodol is a "synthetic chemical product of silver, arsenic and antimony," the effects of which are very similar to those of salvarsan and neosalvarsan, with the advantage that, in addition to being available in ampules for intramuscular or intravenous use, it is also furnished in the form of tablets for oral administration. The A.M.A. Chemical Laboratory reports that each Syphilodol tablet contained approximately three-fourths grain yellow mercurous iodid with minute traces of arsenic, silver and antimony. The laboratory further reports that a Syphilodol ampule contained a liquid having the characteristics of water, in which the presence of less than 1/6000 grain of arsenic could be demonstrated. Shorn of its mystery, Syphilodol therefore is essentially the old, well-known "protoiodid of mercury." (*Jour. A.M.A.*, May 18, 1918, p. 1485).

Pyocyaneus Bacillus Vaccine.—When this vaccine was admitted to New and Nonofficial Remedies in 1910 it gave promise of having therapeutic value. Now the firms whose products are described in New and Nonofficial Remedies advise the Council

on Pharmacy and Chemistry that they have ceased to make the vaccine because of lack of demand. Holding the lack of demand as evidence that the vaccine had proved without value, the Council directed its omission from New and Nonofficial Remedies. (*Jour. A.M.A.*, May 18, 1918, p. 1486).

The Dr. Chase Company.—A fraud order prohibiting the use of the mails has been issued by the postoffice department against the Dr. Chase Company. This patent medicine concern sold three remedies—pills—which, before the Food and Drugs Act made lying on the irksome if not expensive, were known respectively, as “Dr. Chase’s Blood and Nerve Food,” “Dr. Chase’s Kidney Food” and “Dr. Chase’s Liver Food.” Since the enactment of the Food and Drugs Act, however, the term “food” in the name of the nostrums has been changed to “tablets” for obvious reasons. In 1917 K. E. Hafer, the proprietor of the Dr. Chase, Company, was fined under the Food and Drugs Act for misbranding. (*Jour. A.M.A.*, May 25, 1918, p. 1557).

Capsules of Bismuth Resorcinol Compound.—According to the label, each capsule of Bismuth Resorcinol Compound (Gross Drug Co., Inc., New York City) contains bismuth subgallate, 2 grs.; resorcinol, 1 gr.; betanaphthol, $\frac{1}{2}$ gr., and creosote (beechwood) 1 m. The preparation was declared inadmissible to New and Nonofficial Remedies because unwarranted therapeutic claims were made for it; because the name is not descriptive of its composition, and because the combination of the stated drugs in fixed proportions is irrational (Reports Council Pharmacy and Chemistry, 1917, p. 139).

Elixir Novo-Hexamine.—The A.M.A. Chemical Laboratory reports that Elixir Novo-Hexamine (Upsher Smith, St. Paul, Minn.) is not a “stable, palatable, potent preparation of Novo-Hexamine, and acid compound of hexamethylenamine,” as claimed, but a flavored and colored solution of sodium acid phosphate and hexamethylenamine in diluted glycerol. The Council on Pharmacy and Chemistry considered the report of the laboratory and the advertising claims, and declared Elixir Novo-Hexamine inadmissible to New and Nonofficial Remedies because its composition is secret; because the ill-advised use by the public is invited; because unwarranted therapeutic claims are made for it; because the name is misleading, and because

it is irrational to prescribe hexamethylenamine and sodium acid phosphate in fixed proportions (Reports Council Pharmacy and Chemistry, 1917, p. 142).

Formosol.—Sunshine’s Formosol (The Formosol Chemical Co., Cleveland, Ohio) is claimed to contain 18 per cent. formaldehyde in a solution of soap. The preparation was refused recognition by the Council on Pharmacy and Chemistry because it was advertised indirectly to the public and because unwarranted therapeutic claims were made for it. (Reports Council Pharmacy and Chemistry, 1917, p. 145).

Kalak Water.—Kalak Water (The Kalak Water Co., Inc., New York) is a carbonated, artificial mineral water, said to contain in one million parts sodium carbonate, 4,049.0; sodium phosphate, 238.5; sodium chlorid, 806.3; calcium carbonate, 578.2; magnesium carbonate, 48.9, and potassium chlorid, 47.9. In view of the false and absurd claims made, the Council on Pharmacy and Chemistry declared Kalak Water inadmissible to New and Nonofficial Remedies. (Reports Council Pharmacy and Chemistry, 1917, p. 148).

Notwithstanding the many “specifics” and “near-specifics” for hay-fever that have been brought forward in recent years, the disease, if not precisely enigmatical, continues to baffle and perplex. It is evident that no single therapeutic agent has arisen that can eliminate, or even modify, the symptoms in all cases, individual sufferers presenting problems that are peculiar to themselves. The suprarenal substance, in the form of its isolated active principle, Adrenalin, is undoubtedly one of the most reliable alleviants. One feels justified in saying this in view of the long, efficient service it has rendered in the treatment of hay-fever. Not infallible in a strict sense of the word, it affords grateful relief in a vast majority of cases. A powerful astringent, Adrenalin, topically applied, constricts the capillaries, arrests the nasal discharge, minimizes cough, headache and other reflex symptoms, and hastens the resumption of natural breathing. Adrenalin Chloride Solution and Adrenalin Inhalant are the preparations commonly used, being sprayed into the nose and pharynx. The former should be diluted with four to five times its volume of physiologic salt solution, the latter with three to four times its volume of olive oil.

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVII

GRAND RAPIDS, MICHIGAN, AUGUST, 1918

No. 8

Original Articles

FRAGILITAS OSSIIUM WITH REPORT OF THREE CASES.

FRANK L. ROSE, M.D.
JACKSON, MICH.

Fragilitas ossium may be defined as a disease or a defect characterized by abnormal brittleness of the bones with a tendency to fracture on very slight provocation. It was first described in 1838, by Lobdell, who named it osteopsathyrosis, the Greek equivalent of fragilitas ossium. It is also known as Lobdell's disease. Though the term is often used to denote brittleness of bone from any cause as e. g. old age, tumors in or adjacent to bone, syphilis, osteomalacia, etc., it is not so used here, but as the name for a distinct pathological entity, and is so used by most writers. It may be grouped with rickets, osteomalacia and osteogenesis imperfecta since all are characterized by a disproportion between the animal and mineral constituents of osseous tissue, but clinically as well as pathologically it differs from all the others of the group; from rickets in the fact that bones break and do not bend, so that the resulting deformity of fragilitas ossium, if any, have nothing in common with those of rickets, i. e. no cranio-tabes, no bow-legs, and no spinal or pelvic distortions. Nor do these children show other associated signs and symptoms which so frequently accompany rickets.

Osteomalacia, a process of absorption of normal mineral matter of bone, is almost wholly a disease of adult life in women, occurring almost exclusively during gestation. It may be said to be practically unknown in this country. Between osteogenesis imperfecta and fragilitas ossium, however, the line is less clearly drawn, and many authors seem to consider these terms synonymis. However, in osteogenesis imperfecta the fractures occur in utero, the bones are extremely small and very rarely, it is said, does the child reach second year of life. The

two conditions seem of equal and extreme rarity, there being but 130 cases of genesis imperfecta on record according to Keen, while about the same figures would seem to hold for fragilitas ossium.

The three cases which I am now reporting are all in children of the same family, and have all been at various times under my observation and care as the fractures occurred and until firm union was in each case secured. I have represented these cases with others of which I have a history only by the accompanying chart which requires brief explanation. The perpendicular are ancestral lines or lines of descent. The horizontal are family lines, i. e. showing brothers and sisters of the same family. The squares represent male, the circles female, the shaded those who have shown evidence of osteopsathyrosis, the white those free from it, the figures in parenthesis showing the number of fractures sustained, while the figures not enclosed are for convenience of reference only.

The Fuller family of Jackson, Michigan, consists at present of:

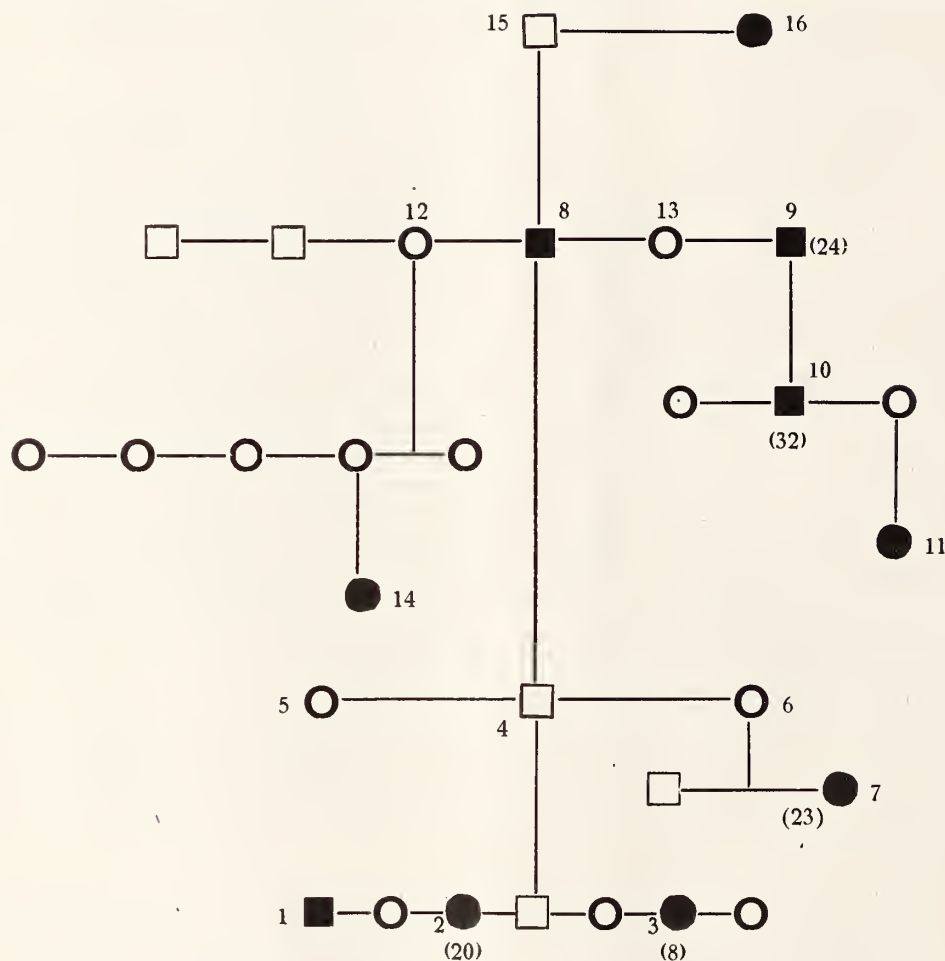
(a) George Fuller, No. 4 on chart, aged 51, laborer, of good health and physique. He has sustained two fractures in his lifetime, one of the clavicle and one of the left femur, but as according to his report both were the result of violence sufficient to fracture normal bone, I have not included them.

(b) The mother, not represented on chart, has given birth to eight children, seven living, one still-born from abruptio placentae last winter. She has had no abortions, nor is there any record of broken bones in her family. This brings us to the three children whose cases I am now reporting.

(c) Jay, No. 1 aged 18, male, of good physique, somewhat below normal height and weight, has suffered thirteen fractures, only one of which, namely, the last, occurred under my observation. A fracture of left radius and ulna healed without deformity or loss of function. The fractures preceding these have been of the thigh, humerus, clavicle, tibia and fibula, and only one has resulted unfavorably, namely, that of the lower end of the right humerus, in which deformity of the elbow resulted, although with perfect function. His first fracture occurred at 1 year, and the last at 15 years of age.

(d) Alice aged 15, No. 2 on chart, has had about eighteen or twenty fractures. The first, of the left femur, discovered nine days after birth, whether present at or before birth is not known, and the last two, of the right tibia and fibula simultaneously at 14. Her second fracture was of the right femur at 2 years of age, and no further fractures occurred until the age of 10, since which she sustained the remainder of the eighteen or twenty fractures which occurred at irregular intervals and from trivial causes. At one time, since I have been treating her, she broke both bones of both legs while walking along a cement sidewalk. All her fractures that have come under my observation since she was 11 have been of the legs about six inches below the knee, except one in

a few fractures, and one of his brothers, No. 9, had twenty-four, and of this man's children one son, No. 10, had thirty-two, the last one at about 30 years of age, while a grand daughter, No. 11, had several, but the exact number is not known. Of the two sisters, Nos. 12 and 13, neither had fractures, one never married; the other married and bore five healthy daughters, but the disease reappeared in the next generation in No. 14. The paternal grandfather, No. 15, was free from the disease, but a sister, No. 16, was said to have sustained so many that she became dwarfed and distorted and traveled as a human curiosity with a circus. However, it seems she married, but whether she left descendants or not my informant did not know. I may add that according to Mr. Fuller



which in addition to the leg bones, she broke the right olecranon in falling.

(e) Lois, aged 7, No. 3, has had eight fractures, the first two at six months, and these have also been mainly of the legs from slight falls. None of the other children have ever broken any bones, but are normal, healthy children, as are the afflicted ones also except for their tendency to fractures.

The two sisters of George Fuller, Nos. 5 and 6, have been wholly free from the disease, but the daughter of one of them, No. 7, aged 20, has had twenty-three fractures, none of which have occurred during the past two years. One of these fractures resulted, I understand, in a false joint in the femur.

The father of George Fuller, No. 8 on chart, had

multiple fractures have been a family trait for more than 100 years.

These fractures possess no special features of surgical interest, unique and remarkable though they are when viewed as phenomena of heredity or of perverted metabolism. The X-ray when employed as it was under most of those under my care showed the fractures to be invariably transverse, therefore adjustment and retention were easy, and for the same reason the fractures were relatively painless though by no means absolutely so. However, they showed a marked tendency toward angular

deformity, which in one case necessitated re-fracture with decided improvement, but not complete restoration or normal contour of the limb. All writers agree that most of the victims of fragilitas ossium grow up with more or less deformity from faulty union, and it must be remembered that in case of fracture of the lower limbs, they lose much time from school.

No one can be confronted with these deplorable accidents thus occurring in such great succession, nor contemplate the fell course of this unique and sinister disease through generation after generation without a lively desire to learn something of the cause and its pathology, and, if possible, of its treatment. If he turns to the literature of the disease, however, he will find it most meager and disappointing. The most complete discussion I have found is in Osler's *Modern Medicine*, first edition, in Emerson's article on fragilitas ossium. Warthin's discussion in the *Reference Hand Book of Medical Science*, third edition, is brief but more satisfactory than most others since he devotes some space to a discussion of its pathology and quotes one author, who explains the disease as due to deficiency of internal secretion. Reports in periodic literature consist mainly of details and in only one that I have seen has any scientific study of any particular case been undertaken. In this case described by Bookman of New York and reported in *Archives of Internal Medicine*, volume 8, page 675, the metabolism in a case of multiple fractures was carefully studied. In this case it was found that calcium was excreted in large amounts through the urine. The significance of this fact, as I view it, will presently appear.

No one, so far as I know, has suggested the thymus as a possible factor, and in mentioning it as such I should like to have it regarded as a suggestion merely and nothing else. The functions of the gland, not being yet fully enough understood to enable one to make positive assertion. It would seem to be fairly well established, although not undisputed, that the thymus exerts a regulative action on the supply of lime salts to growing bone, thymectomy in growing animals and in at least one reported case in a two-year-old child having been followed by softening and bending of the bones and the usual phenomena of rickets. These symptoms when occurring in thymectomized animals are promptly removed by reimplantation of the gland. That phosphorus is the element thus withheld is shown by the fact that

calcium is excreted in unusual amounts which of course must mean that the calcium which normally should combine to form calcium phosphate is compelled by the absence of phosphorus to form other and soluble compounds and so be excreted. Further study of the physiology of the gland which Sajous claims is a prime source of phosphorized compounds is necessary to show whether the hypothesis I have ventured to suggest has any value or not.

DISCUSSION.

DR. HAASS: A metabolic study of such a disease is very inaccurate because of the difficulty of measuring the exact intake and output of Calcium. In a case under observation there was a constant calcium deficit and it was not influenced by feeding glands having an internal secretion. However, feeding calcium does have some beneficial effect.

THE THYROID GLAND WITH SPECIAL REFERENCE TO GOITER.

J. GARLAND SHERRILL, A.M., M.D., F.A.C.S.,
Major, M.R.C.,
U. S. ARMY.

On Surgical Staff of Walter Reed General Hospital,
Washington, D. C.

In order to properly understand the pathology one should become familiar with present knowledge of the anatomy and physiology of the thyroid gland and its relation to the metabolism of the human body. The anatomy in gross is well known, but since the discovery of the para-thyroid glands—the external by Sandstrom in 1880—the two internal by Nicolas, of Nancy, in 1893—it is customary to speak of the combined structures as the thyro-parathyroid apparatus.

The development of the thyroid gland takes place, instead of from three anlagen as was formerly supposed, from the median one originating near the base of the tongue and descending later to rest over the trachea. Anomalies result from failure of the gland to develop, by continuing its fetal form, and by its failure to leave its original location (sublingual thyroid), also by portions breaking off in its descent, thus accounting for accessory or aberrant thyroids.

THE FUNCTION OF THE THYROPARATHYROID APPARATUS.

While much has been learned during the last few years concerning these structures, especially with reference to the results of extirpation, either partial or complete, as well as the developments taking place after the administra-

tion of excessive amounts of thyroid gland structure, or the transplantation of thyroids, the entire function of these organs has not been positively determined. It is sufficient to state briefly, in this connection, that the removal of the entire thyroparathyroid apparatus results in the production of highly nervous phenomena and finally death. On the other hand, in cases where the thyroid gland tissue has been ingested in excessive quantity, the subject presents a peculiar and characteristic train of symptoms similar to those observed in Graves' or Basedow's disease.

Considerable study has been given this subject and many theories have been propounded to explain the manner in which the thyroid carries on its functions, all finally giving way to the view that the organ secretes some substance which finds its way into the blood (Sajous). This was suggested a century ago by the experimental work of King, of London, who found that the colloid substance of the gland passed into the lymphatics. Schiff and others have grafted the gland in abnormal parts of the normal body, and this tends to show that it is a secreting organ. After a time a nest of typical thyroid tissue develops capable of carrying on the function of the gland. Again, extract of the gland, the gland itself in its raw state or dried, when administered after thyroidectomy counteracts the morbid effects of total extirpation. Based upon these findings Murray introduced the use of thyroid extract in myxedema.

The exact nature of the internal secretion of the thyroid can not be positively stated, although Sajous agrees with Oswald in the opinion that the thyroid product is an "iodized globulin," the globulin being the albuminous constituent of hemoglobin, i. e., adrenoxidase. Some observers contend that the product is a ferment and suggest its identity with the active principle of the adrenal. It is quite generally admitted that iodine is an important constituent of the thyroid secretion. Beebe states that "the physiologically active portion of the gland secretion is a protein substance containing iodine in a specific combination." Sajous says that "inasmuch as its activity in this organic combination greatly exceeds that of iodine or its salts, a property which its combination with a ferment (adrenoxidase) explains, its true identity is more accurately expressed by the term thyriodase." He claims that the purpose of this combination is primarily to insure the absorption of the iodine by the red

corpuscles, these cells being the normal host of the hemoglobin.

The secretion of the thyroid reaches the blood either by way of the lymphatics, as claimed by some, or, according to others, enters directly into the blood stream. Both of these views may be correct. Finally, however, the products of both the thyroid and parathyroids reach the blood stream and are carried to the pulmonary alveoli where they combine and are taken up by the red cells along with the adrenal secretion (Sajous).

There has been some conflict of opinion concerning the relation existing between the secretion of the thyroid and parathyroid structures. The dual theory propounded by Gley, that the parathyroids supplement the function of the thyroid, has not been adopted generally, most observers holding that the parathyroid glands are functionally independent of the thyroid. Sajous, however, contends that his conception sustains and completes that of Gley, and mentions the findings of Edmunds who showed the intimate relation between the two structures. He also claims that "the parathyroid constituent of hemoglobin enhances oxidation by increasing, as a ferment, the vulnerability of the phosphorus which all cells particularly their nuclei contain, to oxidation by the adrenoxidase in the blood." Various observers, of whom Sajous was probably the first, attribute to the thyroparathyroid secretion an action similar to that of the opsonins and autoantitoxins. Sajous summarizes the evidence, in this connection, as follows:

"1. The thyroparathyroid secretion and the thyroid preparations used therapeutically act by increasing the sensitiveness of the phosphorus of all cells, particularly their nuclei, to the oxidizing action of the adrenoxidase, and thus enhance metabolism and nutrition."

"2. They also, in virtue of this action, augment the auto-protective or immunizing power of the blood, by increasing the sensitiveness (as opsonin) of all bacteria, their toxins, endotoxins, toxic wastes, etc., that contain phosphorus to oxidation, and thereby to the digestive or destructive action of the complement, both in the blood and in its phagocytes."

It is generally believed that there is a very close relation between the functions of the pituitary body, the adrenal, the thymus, and the thyroid apparatus, but the limits of this paper will not permit discussion of this phase of the subject.

Clinically it is well to determine just how important a properly functioning parathyroid apparatus is to the organism. The results of

both experimental and clinical observations upon this point forces the conclusion that these structures are directly concerned in the development and the well-being of the animal, and anything which upsets the balance of this function, either by increasing or diminishing the activity of these glands, acts in a hurtful manner upon the organism. Total extirpation of the thyroid and parathyroids produces marked disturbances and soon terminates fatally. On the other hand, over-activity of these glands results in a characteristic symptom complex which may prove fatal. There are, therefore, clinically two thyroid conditions quite at variance from each other, which are termed hypothyroidism, when the secretion is lessened, and hyperthyroidism, when it is increased.

In the first class of cases there is a distinct lack of the thyroid secretion, either from absence of the gland, inadequacy, or perversion of its secretion; and this condition may occur even when the gland is enlarged. As a result various nutritional disturbances are noted, differing greatly in degree, from the most trifling changes to the severer forms of cretinism and myxedema. The chief of these phenomena are languor and somnolence, the patient showing fatigue easily. These symptoms are most prominent in the early morning and disappear in part as the day advances. The patients are always complaining of feeling cold, especially in the extremities, and the body temperature is low. A full meal is likely to bring improvement, especially if alcoholic beverages are ingested. The patient appears older than the years would indicate, may be prematurely gray and show patches of loss of hair, which is dry, brittle and coarse. The skin is likely to be also coarse and rough, and pads of fat, especially over the clavicle, are seen in marked cases. Dyspnea or a sense of oppression due to deficient oxygenation of the blood is complained of upon exertion. The blood pressure is low, and the pulse weak and rapid. Anemia is the rule. Defective development of the bones and muscles is to be noted. Melancholia and hallucinations are sometimes observed. These individuals are classed in school as backward, dull, or lazy. More marked cases of hypothyroidism in infants result in typical cretinism, and in adults myxedema.

The second class of cases—hyperthyroidism—results from over-activity of the thyro-parathyroid apparatus, and usually occurs in conjunction with an increase in the size of the gland and in its secreting structure. It is well

to bear in mind, however, that this condition may develop in a gland of normal size. The gland is usually quite firm and vascular, especially in the more acute cases. Dr. Louis B. Wilson has shown that there is a definite relation between the amount of functioning tissue and the absorbable secretion in the thyroid gland, and the severity of the symptoms of hyperthyroidism. In this report there is a close parallel between the new secreting structure and the clinical condition of the patient.

Under the microscope, in active cases, there is an increase of the parenchyma, which may appear in the alveoli as an increase in a single layer of epithelium or a reduplication of layers, or there may be an actual increase in the alveoli. In some of the chronic cases degenerative changes and exfoliation of the epithelium are found. In such specimens the patients were showing some amelioration of the symptoms. These findings seem to explain, in part, at least, how in certain cases there is a change from simple to exophthalmic goiter, and how again an exophthalmic type may be improved and again assume the simple type. In simple goiter there may develop a sudden increase in size, as oftentimes occurs at puberty, during menstruation, and in pregnancy. Along with the increase in size there may develop symptoms of Graves' disease. Again, after such symptoms have been present for a time, they may subside and only the phenomena of a simple thyroid enlargement remain. The gland itself under such circumstances may decrease in size quite perceptibly. A degeneration of the secreting structures in the gland, and a blocking of the lymphatic drainage, account for the change in the clinical picture.

ETIOLOGY.

The cause of hypothyroidism may be classed as hereditary or acquired. Among the hereditary causes may be mentioned syphilis, alcoholism, and gouty diathesis. Consanguinity in marriage has been classed as a cause. The acquired form occurs as a result of too frequent pregnancy, from exhaustion of the thyroid apparatus. Prolonged lactation probably acts in the same way. The milder infectious diseases of childhood may also cause interstitial and parenchymatous lesions in the gland which may result in hypothyroidism. Injury to the thyroid may also produce it, and likewise it may occur as one of the late changes in exophthalmic goiter where the secreting structure of the gland has undergone atrophy.

The etiology of hyperthyroidism and exoph-

thalmic goiter is still in doubt, and we are unable to make any positive statement regarding the causation of this condition. Sajous and Salmon have concluded that the pituitary body is the site of the primary irritation. The former explains the development of hyperthyroidism and exophthalmos upon the assumption that toxic materials in the blood act upon the center of the thyroid and adrenals in the pituitary body. In cases of endemic goiter some observers have concluded that the disorder is produced by the water supply, and investigations have been made to determine just what principle in the water is the active agent in the production of this affection. The most notable investigations in recent years are those of Chambers and McCarrison. Chambers reported to the British Medical Association as follows:

"Many attempts have been made to find evidence of organismic infection. Several hundred sections have been made in some cases, and have been treated by various methods for showing organisms in tissues. Bacteriological examinations, including animal inoculations, have been made in a few cases. The results have been negative. Nevertheless, the histological characters suggest a toxic substance present in the thyroid gland, in some cases diffuse, and in others localized. As to the nature and origin of this substance, we are at present entirely in the dark."

McCarrison, believing that the toxic agent was of bacterial origin, made some investigations of the water from a well-known goitrous well, and reported his work in 1909. The water was passed through a Berkefeld house filter and the filtrate administered in quantities of four ounces in milk each morning before breakfast to six healthy young men between the ages of 18 and 20 years, all showing enlargements of the thyroid gland. McCarrison was the next subject of experiment. At the end of fifteen days his neck had increased 2 cm. in size, and a uniform enlargement of the thyroid was noted. He subsequently repeated the experiment, using the same water boiled, both on himself and seven other men, with entirely negative results. He therefore concludes that goiter is due to matter suspended in water and that this matter is not mineral but a living organism. His theory seems strengthened by his report of sixty-eight cases of goiter cured by the administration of thymol. He says "the main action of this drug is a local one in the intestine owing to the fact that in the absence of oil, alcohol, or other of its solvents, it is very sparingly absorbed. Its curative action is very strong though not conclusive evidence that

the habitat in man of the organism responsible for the production of goiter is the intestinal tract."

Short denies, however, that this evidence points strongly in favor of infection, and rather holds the view that goitrous water depends for its goiter-producing qualities upon minute traces of some metal having a great affinity for iodine and forming with it an insoluble compound. Heredity, fright, and other violent emotions, fatigue and exhaustion, as well as some infectious diseases may cause or at least exaggerate the condition of hyperthyroidism.

Among the affections of the thyroid may be mentioned the following: (a) abnormalities, (b) absence of whole or part of the gland, (c) accessory glands, (d) failure of closure of the thyroglossal duct with formation of fistula or cyst, (e) atrophy.

In addition to these may be mentioned the circulatory disturbances so frequently present. The variations in the vascularity of the thyroid within normal limits is considerable. Undoubtedly this is a sex gland in addition to some of its other functions. An increase in the vascularity and therefore the size of the thyroid occurs at puberty, during menstruation, after coitus, and in pregnancy.

The number of enlargements in females greatly exceeds that in males. Hemorrhage into the gland is not of infrequent occurrence in cases of goiter. Inflammation is very rarely seen in the normal sized gland, but an acute inflammation of the goitrous gland is occasionally observed. The symptoms are at times distressing in such cases. Local tenderness, swelling, and heat are present, accompanied with extreme anxiety, nervousness, dyspnea, palpitation, cardiac distress, sleeplessness, and muscular tremor; in fact, exaggerated symptoms of Graves' disease. These cases are best managed by free purgation, the local employment of ice over the gland and over the heart, absolute rest in bed and the administration of some sedative, such as bromides. Opium had best be avoided in these attacks, as individuals of this type are prone to become habitues.

Following some of the infectious diseases suppuration in the gland has been reported, but its occurrence is rare. Some writers describe a form of chronic inflammation which does not produce hyperthyroidism, but rather tends to diminish the size of the organ. Tuberculosis of the thyroid gland occurs with extreme rarity, and is usually found in connection with a gen-

eral tuberculosis. Syphilis of the thyroid is an extremely rare condition.

FORMS.

The most important study in connection with this structure is that of goiter, which is more or less intimately connected with increase in its size. The enlargements of the thyroid gland may be divided into: (a) simple, (b) exophthalmic, and (c) malignant.

Simple enlargement of the thyroid is perhaps the most frequent affection of the gland. It occurs as a distinct increase in size with a steady growth, or perhaps at times accompanied by periods of rapid but temporary increase, without nervous phenomena or any other symptoms than enlargement.

In time it may produce symptoms from pressure upon the trachea, laryngeal nerve or other structure, and the patient consults a physician because of these symptoms or because of the deformity which results. In some of these cases symptoms of hypothyroidism are observed.

The second type, known as Graves' disease, is always a form of hyperthyroidism. Usually enlargement of the gland is present, but the symptoms may develop without visible enlargement. Advanced cases are easily recognized, but in the early stages this type may be quite easily overlooked. Exophthalmus, enlargement of the thyroid, tachycardia, palpitation of the heart with irregularity, nervousness, which may be extreme, muscular tremor, and paroxysmal dyspnea, are seen during the course of this affection. While some of them may be absent, in most of the severe cases all of these symptoms will be noted. There is a tendency to cardiac dilatation. The cases coming to autopsy show this condition to a marked degree, as well as fatty degeneration of the heart muscle. These changes account for the sudden deaths which occur in some of these cases.

The diagnosis of the different forms of goiter should not be difficult if careful observation be made of the patient from time to time. The location of the enlargement and its motion with the trachea during deglutition are sufficient to prove its thyroid origin. The absence of symptoms characteristic of Graves' disease and the very slow growth will force the diagnosis of a simple goiter. The pressure of even a slight bulging of the eye and rapid heart action make a chain of evidence sufficient to justify a diagnosis of exophthalmic goiter. Where these symptoms are not well-marked, the presence of muscular tremor, especially after brisk exercise,

points to this affection. Certain ocular signs are also valuable in the early diagnosis of this condition. The most important of these is what is known as von Graefe's sign, although described eight years previously by Demarres. In the movement of the eye downward, the eyelid does not follow the line of vision normally, but does so in an irregular spastic manner. Stellwag called attention to the fact that in cases **with marked exophthalmos** there is present a retraction of the upper eyelid while the lid remains much more stationary than it does under normal conditions, and there is a decrease in the frequency of winking. Moebius, in 1895, observed that in goiter there is insufficiency of convergence.

Malignant disease may be recognized by its sudden and very rapid increase in size, by **enlargement of the adjacent glands**, and perhaps by its consistency. If the mass becomes attached to surrounding structures it shows infiltration and this is strong evidence of malignancy. It is well to remember that fixation may follow the use of injections into a simple goiter. Cachexia and loss of flesh occur early in carcinoma.

The prognosis varies greatly, depending upon the variety of the affection, and the faithfulness with which treatment is employed. In simple goiter the prognosis is usually good. It must always be understood that exophthalmos may develop. In Graves' disease the prognosis is more serious, and while some patients respond rapidly to treatment a large number do not. Surgery is fraught with considerable danger in this class, and still the results are remarkably good, especially if operation is performed before cardiac changes are advanced. The malignant form is especially grave, permanent cure being rarely obtained. The operative mortality, too, in this form is great.

TREATMENT.

This brings us to a consideration of the treatment of this affection. What are we to advise patients suffering from goiter? My personal experience has led me to the following conclusions, which may not agree with the views of others, but I feel very safe in the stand I take:

In all simple enlargements, during the early stages I advise a course of medical treatment. This consists of careful attention to the water supply, general attention to the bodily hygiene, the employment of iodine internally and locally, and the administration of thyroid extract. In the presence of hyperthyroidism, the employ-

ment of thyroid extract will increase the symptoms so promptly that a diagnosis can be made and the remedy discontinued. This plan has kept the affection under control in a large number of cases coming under my observation. McCarrison has found thymol of benefit in certain cases. Ochsner commends very highly the treatment of simple goiter by injection of 5 per cent. carbolic acid solution directly into the gland, as proposed by his old teacher, Gunn. In the opinion of the writer a large percentage of cases of goiter, especially the simple type, ought to be carried to recovery, or at least any increase in the size of the growth prevented, without the necessity of subjecting the patient to operation; and the most careful consideration should be given all these patients before surgery is advised.

An objection may be urged to the method of treatment recommended by Gunn because of the fact that adhesions may form, thus rendering subsequent operation more difficult provided it should become necessary. Some observers have reported excellent results from the use of chromium sulphate internally, and as already stated McCarrison claims a cure in sixty-eight cases by the internal administration of thymol. Other authors have recommended the employment of the X-ray, the introduction of iodine into the substance of the goiter by cataphoresis, etc.

Failing to obtain improvement by the judicious employment of medicinal measures, partial thyroidectomy is to be recommended. For the exophthalmic type the most important therapeutic agent at our command is rest. This should consist of rest in bed when the symptoms are aggravated, with absolute freedom from all forms of excitement. During convalescence the patient should be prevented from dancing, card-playing and all other social activities which are conducive to excitement. Sexual intercourse should be prohibited, and exercise should never be carried to the point of fatigue. A change in water supply or boiling the water will prove advantageous. The writer has found the tentative employment of iodine locally and internally of benefit, although some authors condemn the internal administration of the drug in this type of disease. The use of hydrobromate of quinine has been beneficial in the hands of some observers. The serum treatment of Beebe may be of service in some cases, and Rogers claims to benefit cases recurring after operation by the administration of fresh thyroid preparations. He gives this

preparation in very small doses and claims that its action is not the same as that of the dried gland. In the experience of the writer the administration of thyroid extract is contraindicated, as it tends to aggravate all the symptoms in this form of goiter. Thyroidectin in five grain doses has been recommended in this condition.

The most exaggerated cases subjected to the plan of treatment herein advised will show amelioration of the symptoms, and although only a small proportion will be restored to health, many of the patients may be brought to a condition more favorable for operative intervention. The fact must not be overlooked that in exophthalmic goiter there will oftentimes occur a recession of the symptoms even without any especial form of treatment. It is unwise to operate in the height of the process, as in most cases the patient may be safely conducted to a quiescent period when operation may be undertaken with greatly diminished risk. For the malignant cases early and radical removal offers the best chance. Grafting of thyroid tissue may sometimes be necessary in these cases to supply the loss of gland structure owing to the fact that the operation must of necessity be very radical.

A few remarks concerning the operative treatment of goiter may not be amiss. In hypothyroidism the operative risk is markedly less than in cases of hyperthyroidism, and yet in the main the technic is almost identical. The surgeon should first determine whether or not a total or a partial extirpation of the gland or one of its lobes may be safely undertaken. In some cases operative intervention will of necessity be limited to ligation of one or more of the vessels supplying the gland. In a few instances this will be all that is necessary to obtain a symptomatic cure. In others this step will be simply a prelude to a more complete operation at a later date. Some observers believe that ligation of the vessels will show almost as high an operative mortality as the more radical procedure, claiming that the manipulation necessary to its performance will require equally as much time and produce greater damage to the gland than does extirpation.

Before undertaking the operation the attendant should fully consider the best anesthetic to be employed in each individual case. Considerable diversity of opinion has been expressed upon this point. Some surgeons prefer the use of local anesthesia exclusively as the

best method of conserving the patient's vital forces, while others depend entirely upon general anesthesia, and still others (notably Crile) prefer the anoci-association method, by the employment of which it is claimed all noxious psychic influences are removed. The writer believes that with proper selection any one of these forms of anesthesia will permit the safe conduct of the patient through the trying ordeal.

Crile, of Cleveland, and Dunhill, of Melbourne, have given some interesting reports upon the operative treatment of goiter in recent years. The results of these gentlemen are practically the same, although their methods of anesthesia are quite different. Crile claims that he reduces the operative shock and lessens the mortality rate very materially by employing a so-called anoci-association, believing that by removing from the patient the knowledge of the time at which the operation is to be performed, and keeping her under the impression that she is being treated daily by inhalation methods, he can do away with psychic shock and thus obtain more favorable results. By the administration of morphine and scopolamine prior to the giving of the general anesthetic he claims to have reduced the number of devitalized brain cells very materially. He employs nitrous oxide in place of ether, and says that this has also reduced the devitalized brain cells to one-quarter.

Dunhill's work is most remarkable. He employs 1 to 500 novocaine, using several ounces for local anesthesia, infiltrating all the tissues in the front of the neck. The most significant feature of his work, however, is the fact that he operates on patients showing the most advanced muscular changes, with very badly weakened hearts, refusing practically no case. He reports four deaths in three hundred and eighty operations of all classes, two hundred and thirty of these being of the exophthalmic type—a most remarkable showing. To the writer this practically refutes Crile's claim for his anoci-association idea. Most of the patients that we see much prefer to have the operation undertaken promptly after they enter the hospital for that purpose. The anticipation and dread of an operation, the time for the performance of which is uncertain, seems to me to be more likely to produce psychic shock than for the patient to know the exact date thereof. And Dunhill's work seems to prove that the operation can be safely executed in the most serious cases without any increase in the mor-

talidity or distress to the patient, although she may be conscious throughout the entire procedure. It is my belief that careful hemostasis and no blood loss, with a short time on the operating table and little manipulation of the gland during the operation, will enable surgery to be performed upon this organ with comparative safety.

In the execution of the operation it is well to manipulate the gland structure as little as possible, thus avoiding the expression of any quantity of its contents into the tissue of the neck, which might produce symptoms of hyperthyroidism immediately subsequent to the operation. The more rapidly and dextrously the operation is performed, the less will be the danger of the development of such symptoms. Most operators employ drainage in these cases to permit the escape of any excess secretion from the neck. It has always been an open question in the mind of the writer as to whether or not drainage is necessary in any of these cases. Some of our results have been equally as good without drainage as in cases where it was used.

Among the dangers of thyroidectomy may be mentioned hemorrhage and sepsis, both of which should be avoided in the hands of a competent surgeon. Injury to the recurrent laryngeal nerve ought not to occur if the technic is carefully planned and executed, although in some very large growths there is such anatomic distortion as to make it difficult to avoid such an accident. Injury to the esophagus has been known to occur, resulting in a troublesome fistula. Following the operation tetany has been known to develop, in the treatment of which extract of thyroid gland or the parathyroids should be employed, a combination of both being most effective. Even where there has been no injury of the laryngeal nerve, some of the patients will complain of their voice being husky, or there may be marked hoarseness. This symptom usually subsides in a short time. Pneumonia may develop after this operation, especially if ether is used as an anesthetic. While this is a rare complication, still the fact of the possibility of its development must not be overlooked.

In some instances the operation is performed purely for its cosmetic effect. It is advisable, therefore, that the incision be made in such a situation as to cause the least amount of deformity after healing has occurred.

In the conduct of an operation for the relief of this condition each surgeon develops a tech-

nic which is most satisfactory to himself. The operation can be completed readily and with safety under local anesthesia. In very highly nervous individuals gas-oxygen or ether anesthesia will prove more satisfactory, but will add something to the danger. The low collar incision will be most effective for all cases. A dissection should be made with the keen edge of a scalpel, and with the least possible insult to the tissues. Manipulation of the gland during its removal tends to express a quantity of its secretion into the lymph spaces and in that way may produce the symptoms of intoxication which sometimes follow the operation. After the platysma and deep fascia are lifted with the skin, and the superficial veins doubly ligated and cut, the sternohyoid and sternothyroid muscles are retracted, or, in rare instances, divided and the gland exposed. The latter is then readily lifted and its arterial supply occluded. In dissecting the gland care should be employed to leave the fascia on its posterior surface containing the parathyroid glands. A clamp is applied at the attachment of the body or lobe to the isthmus. After the gland is cut away this stump is sutured in such a way as to control hemorrhage and to cover the raw surface. In this way the secretion is prevented reaching the cellular spaces in excess. If both lobes are to be removed special care should be given to the parathyroids and a small portion of the glandular tissue should be left. Careful hemostasis and careful approximation of the fascial and muscular planes will materially improve the post-operative condition. If drainage is desired a small cigarette drain can be placed in the lower portion of the wound, to be removed on the second or third day.

CONCLUSIONS.

In conclusion the writer desires to emphasize the following suggestions:

(1) That in a large percentage of cases of simple goiter the patient may be relieved by medical treatment:

(2) That in some cases of exophthalmic goiter the patient may also be brought to recovery in the same way, but the larger proportion should be operated upon before degenerative changes have destroyed the cardiac musculature:

(3) That in all cases where operation is to be undertaken the surgeon should be careful in selecting the anesthetic best suited to the patient and his own convenience:

(4) That the operation should be executed

without great loss of blood or waste of time and with the least possible manipulation of the gland structure, thus conserving the resistance of the patient:

(5) That in certain cases the thyroid and parathyroid extracts should be administered:

(6) That the same hygienic rules should be followed after the operation as prior thereto:

(7) That the results of operative intervention have been remarkably good, the mortality being between 1 and 2 per cent.

SO-CALLED BLADDER DISEASES.*

SIMON LEVIN, M.D., F.A.C.S.

LAKE LINDEN, MICH.

The bladder stands in relation to the organs of the Wolfian system from which it takes its origin the same as the stomach does to its system of the intestinal tube and the various embryological and histological divisions thereof. Doctor Wm. Mayo has said that the stomach is the receiving station for all troubles in the intestines and gall-bladder, etc., and we can say that the sympathetic fibers carry the message of troubles from the kidney, ureter and the bladder to the trigone area as a trouble station giving warning of disease somewhere along the urinary tract. Therefore, subjective symptoms in the bladder may be the only signs noticeable, while the underlying lesion of the disease gives no definite localizing indication whatever.

Furthermore, a disease may begin as an infection of the bladder and by extension, as I will describe later, become a distinct pyelitis making of the disease only a so-called bladder difficulty. When treated as such latter disease, we can readily see the fallacy of expecting a cure. This class of cases are many, as I have demonstrated in my own practice as well as in consultation work. It is by the cystoscopy and the ureteral catheter that a true differentiation and a localization can be made, and furthermore, a certain proportion can be only successfully treated by a direct application through the cystoscope or the ureteral catheter. I wish to warn against the "trust-to-luck" and pure medical care of this class of cases because we have many patients with annoying and distressing symptoms and patients who are constantly in danger of various degrees of absorption and of sepsis from infection of this region as well as other parts of the body. Therefore

*Read before the Houghton County Medical Society, April 8, 1918.

I would make a direct plea for a more careful and accurate diagnosis in this series of pathologic conditions. Hunner of Baltimore in a recent article reported how we have used the terms "irritable bladder," "neuralgia or neurosis of the bladder," or "neurasthenia with the mind centered on the bladder" as definite diagnostic entities, or to cloak our ignorance in seeking to classify that group of patients who suffer from so-called cystitis, and do not respond to the ordinary treatment of cystitis, or casual treatment after cystoscopy where no local cause could be found. Some of these patients suffer intensely even to the degree of incontinence, sometimes from a urethritis that is relieved when some far removed source of infection has been eradicated, as an infected tooth, or tonsil, or a suppurating sinus.

This discussion will make a study, as exhaustive as the time and conditions will permit, to demonstrate the disease that will give bladder difficulties having their source in the ureter, pelvis of the kidney, or the kidney, or some extraurinary location.

URINARY CAUSES.

1. *Renal Tuberculosis*.—The first of importance in the urinary causes is renal tuberculosis. It is a known fact that many observers have studied and demonstrated that renal tuberculosis can be present for even many years with only vesical symptoms for a long time. Not until cystoscopic examination with the use of inoculation and the microscope shows the source, does the method of treatment change. Unfortunately, as I have seen in a few cases, the bladder has been seriously injured by this old infection and that removal of a tuberculous kidney saved the patient's life and made life bearable, nevertheless, the bladder needed much treatment to eradicate the disease from this organ, which consisted of ulceration, edematous and hemorrhagic cystitis.

Males are more subject to this bladder irritability than females and hematuria which accompanies tuberculosis of the kidney is frequently due to ulceration of the bladder, occurring more commonly in the male.

In Braasch's series of 203 cases of renal tuberculosis "90 per cent. of the patients have vesical symptoms extending over a period of six months, and more than 50 per cent. more than a year. The remainder had vesical symptoms, the cause of which remained unrecognized in some instances as long as ten years."

I wish to present two case records that illustrate very well this phase of the subject.

1. Mrs. D. B., who was 35 years of age, married, with husband living in good health, had three living children—baby five months old. Her family history was practically negative except that she was the oldest of thirteen children with seven living, other six died in infancy—causes unknown.

Personal History.—Has had all children diseases except scarlet fever—no sequelae; menstrual history negative and twenty-eight day type; married at 25 years and had three moderate labors—no forceps and no lacerations. Baby is living at five months. Five years ago had a dry pluerisy but recovered nicely.

Present Illness.—Had little bladder difficulty before the last child was born, but afterwards had to urinate very frequently with pain, and did not feel well otherwise. For first two months micturition occurred four times at night and q. two to four hours daily. For last three months has been losing weight and felt sick with more frequent and painful urination both day and night. Pain was very severe at times extending over the whole abdomen, but for the last three weeks localized itself to the right lumbar region, where she thinks she feels a tender mass. She vomited but once. Has had chills fevers and headaches at times. Urine became mucky for last three months, being cloudy and having a peculiar odor.

Physical examination: 2 p. m., January 4, 1917, Temperature 99.2° F., Pulse, 100. Emaciated and looked sick. Mouth negative; neck negative; chest and heart negative; breasts are secreting (nursing).

Abdomen: Negative except for the firm mass, the size of one and a half to two kidneys, fairly movable on breathing in the region of a movable kidney on the right side. This is the mass the patient found herself. Left side negative and the kidney is palpable.

January 6-7, 1917. Temperature 101.6° F., Pulse, 100-99.

Cystoscopy: January 7-9, 1917. Bladder normal except for great deal of edema one inch about right ureter opening with pus running out from that side. The right ureter opening was obscured. Left ureter opening normal. The ureters catheterized.

Specimen of urine from bladder very cloudy. 1,020, acid. Albumen ++ Sugar negative. Sediment great deal of pus and very few red blood cells.

Ureter specimen: Right, nearly pure pus, 1,009, acid. Albumen ++++ Sugar negative. Sediment, pure pus. This specimen sent to the State Bacteriological laboratory at Houghton. Reported negative, (which does not correspond with the kidney findings.) The bacilli demonstrated in the urine later.

Left, specimen clear, 1,020, acid. Albumen negative and sugar negative; ind. negative. Sediment negative except for few red blood cells.

Phenosulphonophthalein test: Right side, dye appeared in thirty minutes; left side dye appeared in five minutes.

I did a right nephrectomy on January 11, 1917, using a long oblique right lumbar incision. The kidney was adherent to fatty capsule and the pelvis much dilated and the ureter indurated. The last appeared like a thickened acutely inflamed appendix.

In enucleating the kidney and ligating the pedicle I had to use great care in not including the dilated pelvis in my ligature. The stump of the ureter was injected with ninety-five per cent. carbolic acid. On account of the soft and mushy wall of the ureter it was necessary to put in a small drain before closing the wound. She had practically an uneventful recovery with a pulse ranging no higher than 106, temperature remaining normal on the seventh day, and the urine increasing from eight ounces to nearly a quart. The sinus remained open for some months but with the exception of considerable bladder irritation up to a few months ago she has made an excellent recovery and has been practically doing her own work after five weeks following the operation.

Case 2. Mrs. F. N., married, age 36 years. Husband is living. She had nine children, baby six and one-half years of age.

Family History: Father died at sixty years, of accident. Mother is living at seventy-two years. Is fourth of thirteen children, five living and eight died in youth but there was no tuberculosis nor cancer in the family. One daughter, 15 years of age, has had a bone tuberculosis six years ago but is cured at present. She has now a phlyctenular conjunctivitis.

Personal History: Had measles at three years—no sequelae. She menstruated first at 13 years, regularly, q., twenty-eight days, with moderate flow, three to four days in duration having no pain. At present this function remains the same.

Married at 17 years. Had nine moderate labors with no forceps or lacerations. At 30 years of age had an incipient pulmonary tuberculosis with a cough, with temperature 99.6° to 100° F., p. m., for a whole winter, but was apparently cured. During this time a moderate cystitis appeared, which lasted for three weeks.

Present Trouble: In September, 1914, had a so-called cystitis, which consisted of tenesmus, severe pain in the bladder region, frequent urination, with a mucky pusy urine which contained at times some blood. This did not cease until after the operation in 1915. In fall of 1915 and during winter of 1915 until June, she suffered for a few hours at times with intermittent colics in right renal region and along the ureter. In April and May, 1915, these colics occurred every day, causing her to remain in bed most of the time. Patient lost about twenty pounds in weight. Bladder lavages did but very little good. The temperature during this time ranged between 99.6° F., to 101.2° F., p. m., with occasional chills. She did not submit to full examination until May 24, 1915.

Physical Examination: Temperature 101.2° F., p. m. Pulse, 100 to 104.

Mouth, neck, lungs, heart, all negative.

Abdomen negative except for slightly enlarged and tender right kidney with tenderness on pressure along the right ureter. Bladder area also tender.

Pelvis negative.

Cystoscopic examination demonstrated an ulcerative and a bullous cystitis marked about the right ureter. The urine from the right ureter contained a moderate amount of pus and a small amount of

blood. The left ureter urine was practically negative. Tubercle bacilli were demonstrated in the pusy urine after many specimens were examined. Excretion of dye was not recorded.

The diagnosis was a clear case of right sided renal tuberculosis.

Operation: June 7, 1915. I did a right nephrectomy using a long oblique right lumbar incision, and tying the pedicle with kangaroo tendon. The stump of the ureter was injected with ten to fifteen drops of ninety-five per cent. carbolic acid. Wound closed without drainage after filling it with normal salt solution. I opened the wound on the fourth day on account of suppuration and the sinus remained open for four months. Convalescence was rather slow and she did not leave the bed for three to four weeks.

The bladder ulceration soon improved materially so that in six months from the nephrectomy there were very few cystic symptoms. I saw her March 23, 1918, and she was in perfect health without any bladder difficulty whatever.

PYELONEPHRITIS.

We classify under this head infections other than the Kock's bacillus the causative factors being the colon bacillus, staphylococcus, streptococcus and gonococcus—colon bacillus being the most common. This condition may be unilateral and be accompanied with marked ulceration of the bladder and vesical irritability. This, of necessity, would be confusing with renal tuberculosis, requiring inoculation of the guinea pig to differentiate. We can readily appreciate that a diagnosis could not be made without the refined methods of separating the renal secretions. With pyelonephritis we may have remissions but even after treatment of the pelvis of the kidney where the condition is more limited to the pelvis, we cannot say according to Braasch, Kretschmer, etc., that a cure has been attained till the urine catheterized from the ureters contains no culturable germs.

Pyelograms and functional tests with phenosulphonophthalein gives us much assistance, although, occasionally, with considerable presence of pus in the segregated urine, we get a fair degree of time excretion of dye. In 121 cases reported from the Mayo clinics in 109 cases the cystitis came from pyelonephritis. Braasch also says that the proportion of cystitis in the adult female accompanying this condition is greater and more frequent than in the male.

Pyelonephritis with the infection and stricture of the ureter give us the surgical kidney that is so frequently spoken of.

PYELITIS AND URETERITIS.

I give this the honor of a place in classification because of the great number of cases of this type that go unrecognized, where the bladder is subjected to accusation, and the cause of prolonged infection lies in the pelvis of the kidney and ureter with strictures, and feeds the bladder with pus and the germs of infection. Some of these commence as cystitis, or urethritis or extravescical from exanthemata or focal infection. The only treatment consists in dilatation of the ureter infected, and treatment of the pelvis of the kidney directly through the ureteral catheter. A man 47 years of age, came to me with severe intermittent attacks of so-called cystitis—pus in varying amounts and small amounts of blood, tenesmus, and severe pains. No doubt it originated in an old badly instrumented post—urethritis. He had been treated for one year in the ordinary medical way. Until he permitted me to dilate a partial stricture of the right ureter, and give lavage of the right renal pelvis and ureter, I obtained no results. This diagnosis was verified by one of our best genito-urinary men. My method of treatment resulted in a cure, following dilatation and lavage of the renal pelvis.

LITHIASIS.

As far back as 1852 in reviewing an old volume of Wood's Practice of Medicine I found that the stone of the kidney and the ureter mentioned as cause of symptoms in the bladder. The bladder symptoms as we recognize them are frequency of urination, and irritability with varying amounts of pain. At the Mayo clinics 70 per cent. of this type of cases had distinct vesical symptoms. We know that an impacted stone in the ureter near the bladder can give quite serious signs of an acute cystitis with presence of blood, and has occasionally caused a considerable error in diagnosis. The colics of lithiasis, when there is obstruction, or an attempt of movement of the stone or just the presence of a stationary stone in the ureter are not as classic as we would desire them to be for easy methods at a guessed diagnosis, and in our experience we can call to mind serious results, even death, coming to patients whose apparent recovery from attacks lead us into only an apparent safety.

In a young man in whom I diagnosed a pyonephrosis with stone in the left kidney, we observed some pain in the kidney region, but he had a distinct irritable bladder. Cystoscopy and X-ray cleared the mooted question. After

removal of the kidney which contained several irregular stones and several abscess pockets, he made an excellent recovery.

EXTRAURINARY CAUSES.

Many women have been subjected to fancy operations of the pelvic organs of various types—removal of the ovaries, cystocele operations, and displacement operation—to relieve an irritable bladder, and still the irritable bladder remained. Through a careful cystoscopic examination we can demonstrate the presence or not of any urinary cause and establish to what extent the pelvic deformity or disease acts as the cause.

Recently I examined a woman of 35 who had an irritable bladder for many years following a nephrectomy for renal lithiasis and abscess. Her infection came from an ulceration of the left ureter by an adjacent abscess. I saw in the bladder eight years following the nephrectomy a distinct bullous area about left ureter opening, and from symptoms in pelvis believe that the irritability of the bladder was caused by pelvic inflammatory conditions in the original site of the abscess. She had colics in the left pelvis with a tenderness in this area.¹

There is a large question in my mind if an otherwise normal uterus in abnormal position can cause an irritable bladder.

The conditions which may act extraurinarly as causes of vesical symptoms are:

1. Pregnancy.
2. Tumors.

According to experience at the Mayo clinics, they find very few large tumors the cause of vesical symptoms. In fact Braasch cites a case of a woman 32 years of age with a tumor of the pelvis and an irritable bladder. Hysterectomy was done for uterine tumor but she was no better. On cystoscopic examination one year later it was discovered that she suffered from tuberculosis of the right kidney. Right nephrectomy was done and a year later she reported that the so-called bladder difficulty disappeared.

3. Malignant extension.
4. Inflammatory extension, as I cited in my case above.
5. Mechanical interference as displaced uteri, cystocele, and rectocele. These are given

1. This patient came to operation April 12th, 1918, and we found considerable pathology in the left pelvis consisting of a very badly adherent, large, cystic ovary, and left tube. The adhesions were very tough and involved the ileum, sigmoid, omentum, bladder and parietal peritoneum, necessitating double ligatures before severing.

more credit for "so-called bladder difficulties" than they really deserve.

In concluding my paper for this evening it would be well to briefly discuss the interesting question of ascending infection which is so little understood. In an article in February, 1918, in the *Surgery Gyn. & Obstetrics*, Doctor V. C. David before the Chicago Surgical Society outlined an experimental study on pyelitis, kidney infection, and ureteritis following a primary infected bladder, using the colon bacillus for the infecting organism and the turpentine bladder for the locus minoris resistentia. He also reviewed the literature on the subject from 1860 to date.

The lymphatics of the urinary tract received considerable experimental investigation commencing with "Morcagni in 1787 who described a connection between these vessels in the ureter and the kidney." Teichman in 1861, Krause in 1876 described these vessels in ureteral mucosa. Later they were demonstrated in the ureteral muscularis.

Eisendrath and Shulz carried on corroborative experiments and, as the former at the time told me personally, felt that many of these infections traveled along the lymphatics.

Investigations were carried on by men like Zeit, Peterson, Lewin, Sweet, Stewart, Cabot, Crabtree and many others to determine the selection of progress of infection upward of the urinary tract, some concluding that the blood stream carried it and others, the various lymphatics.

It was demonstrated that there is a communicating set of periureteral lymphatics connecting with the lymphatics of the muscularis of the bladder making a distinct route to the perirenal and sub-pelvic tissues. Sakata in 1903 using the Prussian blue method of Gerota demonstrated the above lymphatic connection and that the upper periureteral and sub-pelvis lymphatics drain into the hypogastric, the middle into the lumbar glands, and that an anastomosis between the two sides could occasionally be injected. (David).

Bauereisen advanced the theory at this time, in 1910, following some thorough experimental work which brought out the fact that the lymphatics of the mucosa and muscularis of the ureter communicated, and that the choice of travel of infection upwards was by the lymphatic route. He also believed from his experiments that you could have lymphatic infection of the kidney without encroaching upon the mucosa.

David's conclusions are very significant, and briefly stated include the following: In unobstructed bladders, infection may ascend the lumen of the ureter but it is not common. In obstructed bladders, partially or totally, infection most frequently does ascend more commonly by the lumen in shorter time than by the periureteral lymphatics, going to the sub-pelvic fat and by contiguity spreading to the pelvis of the kidney. The presence of a perivesical infection encourages a quicker extension to the pelvis of a kidney, or the kidney, or the perirenal region.

I wish to acknowledge that I freely draw extracts of information on literature from Dr. V. C. David's article.

BIBLIOGRAPHY.

1. Mayo Clinics, 1917.
2. V. C. David—February, 1918—S. G. & Co.
3. G. L. Hunner—J. A. M. A.—Vol. 70, p. 203.
4. L. E. Schmidt.
5. D. Eisendrath.
6. P. M. Pilcher—Practical Cystoscopy.
7. O. Rumpel—Cystoscopy.
8. R. Guiteras—Urology.
9. Floreisheim—Int. Med.
10. F. Hinman—Calif. St. J. Med., 1917, XV, 392—(ab).
11. White & Martin, G. U. Surg. & Ven. Dis. (3rd).

ROENTGENTHERAPY IN GYNECOLOGY.*

GEORGE E. PFAHLER, M.D.
PHILADELPHIA, PA.

Roentgentherapy has taken a definite place in gynecology, and while the indications, the contra-indications, and the limitations are not yet definitely established, sufficient good work has been recorded and is being done in all civilized countries to justify its serious consideration before an organization of this kind.

I treated my first case of fibroid of the uterus in January, 1906, at the request of Dr. Mary Griscom. My experience, therefore, extends over a period of twelve years, and while I have not treated an immense number of cases, this long experience has given me an opportunity to judge the after effects to better advantage than some of the authors who have had a much larger experience with this class of cases, but over a shorter period of time. I believe that the general profession is more anxious to know the ultimate end results than the technic or the immediate effects. In this period of twelve years the technic has, of course, varied greatly, and one should always expect more definite results and more favorable results from the

*Read by invitation before the Section on Gynecology of the Michigan State Medical Society, May 8, 1918.

modern methods than from those that were employed in the early years. While hundreds of communications and even books have been written upon this subject, there still remains in the minds of surgeons, gynecologists and the general practitioners, a number of doubts and fears which must be given serious attention, and it will be my aim in this paper to devote some attention to the solution of one of these questions.

UTERINE FIBROIDS.

Roentgentherapy has been used more extensively in uterine fibroids than in any other gynecological condition. Therefore, this subject will be discussed first. The first case of uterine fibroids treated by the X-rays and recorded in America was that by Dr. J. E. Hett of Ontario, Canada, published in the *Journal of Advanced Therapeutics*, September, 1904. During the same month and in the same year Deutsch (1) reported upon the relief of the symptoms in four cases of uterine fibroid. Since then thousands of cases have been treated.

The *indications* for treatment of fibro-myomata are: 1st. All cases of myoma in older women in whom there is already a well-advanced anemia, which may be the cause of an anemic heart. 2nd. All elderly and young women with myomas, in whom there is marked organic heart disease, diabetes mellitus, chronic nephritis, marked lung disease, and goiter with cardiac symptoms. 3rd. All patients beyond the age of forty years, in whom there is no contraindication to the treatment. In general, the older the patient and the nearer she has approached the menopause, the more prompt and satisfactory will be the result. Under forty years, Roentgentherapy is not the method of choice, but good results can be obtained, though the younger the patient the more treatment will be required. Even in patients under forty, if the alternative is complete extirpation of the uterus and adnexa, Roentgentherapy should be seriously considered. 4th. The intramural or the interstitial variety of tumor gives the best results.

Krönig (2) says his clinics have abandoned the operative treatment of fibroid for the treatment by the Roentgen rays, except in those occasional cases where it appears that myomectomy may leave a functioning uterus for a young woman. The argument is that the Roentgen rays are just as efficient in their action as total ablation, and devoid of all danger to life, while an operation carries with it operative mortality, even if it is small. The

artificial menopause symptoms in general are not nearly so pronounced as after operation.

Contraindications.—1st. All cases of myoma in which the tumor is pedunculated, or which can be excised without destroying the reproductive powers of the patient. 2nd. Fibroids that are believed to have undergone malignant degeneration, or that have become gangrenous, should not be treated, but if malignant should be operated upon and followed by deep Roentgentherapy. 3rd. Fibroids associated with disease of the adnexa. 4th. Fibroids which are producing such marked symptoms that the patient is endangered more by waiting two or three months for results of Roentgentherapy, than by the results of an operation. 5th. Fibroids associated with pregnancy.

The Probability of Cure.—In the clinical reviews made by Gauss (3) he divided the 1395 cases into three groups according to the dosage given. The first group embraces a total of 693 cases in which the total dosage amounted to from 50 to 175 Kienböck X-units. Group 2 included 544 cases in which the dosage varied from 175 to 500 X-units. Group 3 included 158 patients who were given doses amounting to from 500 to 1,500 X-units. Corresponding to the rise of the total dosage in the three groups, there is a rise also in the percentage of cures of 72, 82 and 95 per cent. It can be seen that the percentage of cures obtained is greater according to the dose of radiation applied to the surface of the body. To this also must be reckoned the fact that, in addition to the increase in dose, the rays applied in recent years have been more penetrating and more thoroughly filtered. In group 3 practically all of the cases of myoma and metropathy that presented themselves for treatment were treated. At least this was true at the Freiburg clinic. Therefore, since all varieties of cases in group 3 were treated, the results must be due to improvement in technic. In group 1 there was evidence of recurrence in 4 per cent; group 2 of 3 per cent, but in group 3 there was no recurrence to record.

It is my opinion that the amount of treatment should be governed more especially by the size of the tumor, for large tumors require more treatment than small tumors, and it requires a greater distribution of the rays and more portals of entry in order to influence the deeper portions of this tumor. If this thought is kept in mind and carried out, the development of malignant disease can be prevented in many instances.

The Cure consists in the relief of all symptoms. Of these the symptoms that causes the patient to seek assistance most often is *hemorrhage*, and this is the first symptom to be relieved. In some cases it is relieved immediately. With the majority, the bleeding of the first menstrual period following the first course of treatment is uninfluenced or only slightly diminished. In the second period, which follows the first and the second series, it may be expected to be diminished or absent, and rarely is there any bleeding after the third course of treatment. In some cases in which the bleeding is continuous over months, it stops almost immediately after the first course of treatment, acting almost like magic. The *disappearance of the tumor* is the latest result, and generally there is no appreciable difference in the size of the tumor during the first month following the first course of treatment. During the second month there is generally a distinct reduction in the size of the tumor which can be appreciated by the patient as well as the attending physician. After this there is a progressive diminution in the size of the tumor, which continues long after the treatment has been discontinued. In one of my early cases, at the beginning of treatment, the tumor extended to the umbilicus. At the end of treatment, and when treatment was discontinued, it was the size of a grapefruit. When next examined, at the end of a year, it was the size of an orange, and when examined five years after beginning treatment, it had entirely disappeared. I believe, therefore, that with modern technic and sufficient cross-firing that the tumors should entirely disappear. They may, however, be expected to atrophy after the treatment has been discontinued, and I believe it is not advisable to continue the treatment indefinitely until the tumors have disappeared, for one can give too much treatment and damage the overlying tissues. The *pressure symptoms* will, of course, disappear in the proportion with which the tumor itself disappears, but generally speaking these pressure symptoms disappear early, within the first month or two, and rarely are present after the third month.

BRIEF RECORD OF MY OWN CASES.

Number of cases of idiopathic hemorrhage, 25. All cured.

Number of cases of fibroid treated, 95.

Number of cases in which treatment was refused, 4.

In one case treatment was refused because the patient was pregnant.

In three cases treatment was refused because there was objection to operation, and I believed that the operation would give quicker and better results.

Of the patients upon whom treatment has been discontinued, and whose present condition is known, there are 67.

Of these 67, permanent amenorrhea has been produced in 56, or 84 per cent.

Temporary amenorrhea has been produced in 4, or 6 per cent.

Return to normal menstruation 4, or 6 per cent.

The tumors have disappeared in 50, or 75 per cent.

The tumors have been greatly reduced in size in 7, or 10 per cent.

Patients operated upon after beginning treatment 6, or 9 per cent.

Patients discontinuing treatment shortly after beginning 4, or 6 per cent.

The records, therefore, show an amenorrhea produced in all the cases that continued treatment, and the tumors have disappeared in 75 per cent., and were sufficiently reduced to give no symptoms in 85 per cent., the remainder either having discontinued treatment shortly after beginning, or have been operated upon.

SUBSEQUENT MALIGNANT DEGENERATION OR FEAR OF MALIGNANCY BEING PRESENT AT THE TIME OF TREATMENT.

This point has been emphasized by surgeons more than anything else, and is given as the greatest contraindication for this treatment. I believe, however, that this fear is very much exaggerated and unjustified. Under contraindications I have, of course, included malignancy, and I believe that if malignancy can be recognized clinically, that there should be total extirpation surgically followed by post-operative X-ray treatment, but this fear of malignancy need not be a nightmare and should not be over-exaggerated, for, in Krönig's (2) third group of cases, consisting of 158 cases, all types of cases were treated as they came, and yet we have no record of malignancy developing. During the past fourteen years in which Roentgentherapy has been used in the treatment of fibroids of the uterus, there surely have been two or three thousand cases treated. It is likely that most of them have been more or less selected, and that clinically recognizable malignancy has been eliminated in the majority of cases, yet we must all acknowledge that only a very few cases have been recorded as becoming malignant afterwards, and in some of these

cases, at least, insufficient treatment has been given to produce results, and the treatment was given at a time when technic was less fully developed.

In one of my cases, Miss S. L., age 33, referred by Drs. H. Lowenberg and M. Griscom, November 18, 1910, the patient was treated for a fibroid which measured, according to Dr. Griscom's report, 7 x 4 inches and filled the pelvis. Operation was refused. June 24, 1911, seven months after beginning treatment, Dr. Griscom again examined her and found a great reduction in the size of the tumor. Her menses had returned to normal. Therefore, we both advised discontinuing treatment because, at the age of 33 we did not want to produce a permanent amenorrhea. Seven years later she was operated upon by Dr. Deaver. At the operation he found a sarcoma about the size of an orange lying to the left of the uterus, apparently detached from the uterus. The uterus had returned to normal and the fibroid had disappeared excepting for two or three very small atrophied or shrunken fibroids of the pedunculated type, about the size of grapes, attached to the outside of the uterus. Since the operation, the patient has remained well. This sarcoma may have been present at the time of beginning treatment. If so, it must have been very much subdued in its malignancy or it would have given more pronounced symptoms with probably metastasis within the seven years before the operation. Therefore, if malignancy was present at the beginning, the treatment surely had an ameliorative effect upon it, and probably encapsulating it, and making a cure more certain as a result of the operation. On the other hand, it is possible that no sarcoma was present at the time of beginning treatment, but that this sarcoma developed later, just as a sarcoma may develop in anyone, the cause of which has not yet been determined. The fact that the uterus had returned to normal, and only a few shrunken masses of the size of grapes were attached to the uterus, would seem to indicate that this sarcoma was not a late degeneration of the fibroid.

One other case of malignancy has come to my attention. This case has been reported by Dr. George Erety Shoemaker (4). This patient, at the age of 49 was found to have a large fibroma of the uterus tightly filling the lower abdomen and pressing upon the urinary tract. She was treated by an electrotherapist by means of cataphoresis. She received

one or two treatments a week for nearly a year with no effect. In November, 1907, she was treated by one of my colleagues with small fractional doses of Roentgen rays. The tumor, under this treatment, was reduced to about one-fourth of its original size; the hemorrhage was controlled by April 1st, 1908. Nine months later, in January, 1909, the tumor grew again to the level of the umbilicus, and eleven more small doses of treatment were given. The tumor remained quiet from November, 1909, until November, 1912—three years—when it began to grow, the hemorrhage reappearing in December, 1913. In April, 1914, Dr. Shoemaker removed the tumor which was found, upon microscopical examination, to be sarcoma. There was no sign of extracapsular invasion or metastasis. At the time of the report, April 7, 1915, the patient had reported herself to Dr. Shoemaker as being well. On July 31, 1915, this patient was sent to me by Dr. Shoemaker for treatment of a recurrent sarcoma. At this time, 15 months after the operation, the tumor was about the size of a teacup. After two courses of treatment it was reduced to about half. September 18, 1915, after no further reduction occurred from three more courses, she was requested by me to again consult Dr. Shoemaker, who found her unsuitable for operation. Coley's fluid gave some temporary improvement, but she died of exhaustion at the Presbyterian Hospital June 17, 1916. Autopsy showed general infiltration of the pelvic viscera including the large and small bowel and the bladder, with necrosis in the center of the chief pelvic tumor mass, which communicated with the intestines.

This case is instructive in more than one sense. In the first place, the treatment given originally was not according to our modern technic, but consisted of the small fractional doses in use in 1907. Second, if this were a malignant growth at the beginning, the Roentgentherapy, even though insufficient, according to our modern ideas, held this growth in check for seven years, and during the period of almost five years no treatment had been given, yet the tumor, at the time of stopping X-ray treatment, could still be felt above the brim of the pelvis. Third, the patient only remained free from recurrence after the operation a little more than a year, and died two years and two months after the operation. Therefore, we cannot prove, from this case at least, that the operation was in any sense a

safer procedure than thorough deep Roentgentherapy would have been.

Miller (5) made a study of 9,750 cases of fibroid to determine the average percentage of sarcoma. This was found to be 1.96 per cent. or practically 2 per cent. He also made a study of 6,646 cases as to the mortality from radical myomectomy, and found it to be 4.87 per cent. The operative mortality differs, of course, with the operator, but it also is greatly influenced by the care with which the surgeon selects his operative risks, and by the character of the operation that is necessary in each particular case. In order to determine the primary and permanent results of this same radical operation, he made a study of 180 cases operated upon for sarcoma. Of these twenty-three or 12.7 per cent. were reported free from recurrence of sarcoma after a period of twelve months or more. Of the 180 cases, 81 died, some following the operation and some of recurrence or metastasis. Seventy-six cases were not followed over twelve months. Of the 180 cases, 74 were sarcomata of the uterine wall, with a mortality of 47.3 per cent; 40 were sarcomata of the mucosa, with a mortality of 42.5 per cent.; and 66 cases, in which the kind of sarcoma was not designated, had a mortality of 40.9 per cent. Out of 74 interstitial sarcomata, 32 would have received X-ray treatment, i. e., if one may be allowed to say so, a mistake in diagnosis might have occurred in 43.2 per cent. of the cases. Miller says that, from a consideration of these facts, it seems queer that even with the use of the operative treatment a certain cure of more than 25 per cent. at the most cannot be assured.

As to the relative value of X-ray treatment in these sarcomas, no one can answer, for of course the patients treated by the X-rays can have had no microscopical examination made, and consequently the diagnosis of sarcoma would always be in doubt. Based upon my experience, however, in the treatment of general sarcoma of all types as they are referred to me, I find that I get recovery in about half of them. There is, therefore, no serious danger in mistaking an interstitial sarcoma for fibroid, since the results to be expected from deep Roentgentherapy are at least equal and probably twice as good as from operation.

According to Tracy's (6) records, as well as those of other men, there has been malignancy found in approximately 10 per cent. of the patients operated upon for uterine fibroid. All

authors agree that from 6 to 10 per cent. of the cases operated upon for uterine fibroids are found to be malignant when a careful pathological study has been made. Accepting the worst as 10 per cent., and acknowledging that at least 2,000 patients have been treated for uterine fibroids by Roentgentherapy, then 10 per cent. of 2,000 cases is 200 cases that should have developed malignancy subsequent to the Roentgen treatment. I believe that any fair-minded person willing to judge this subject squarely will acknowledge that if 200 cases of malignancy had developed in women following treatment by Roentgentherapy, that the literature would be so full of these records that the subject would need no discussion at the present time, and instead of surgeons and gynecologists calling our attention to the likelihood of this condition developing, we would have actual record of probably the whole 200 to show that it is a danger. It would seem, therefore, that if only four or five cases are on record in which malignancy followed Roentgentherapy, we must acknowledge that we have either cured or prevented the development of 195 cases of malignant disease, or, in other words, we have reduced the 10 per cent to $\frac{1}{4}$ of 1 per cent. This then would be, instead of a condemnation of the treatment, the strongest argument in favor of it, for we must have either cured or prevented the malignant disease. It is entirely possible that there are many more cases which have developed malignancy but have not been placed on record. However, Roentgentherapy in this group of cases has been given, for the most part, in the large centers of population, and it is likely that any cases of malignancy would have been recorded in literature by the operating surgeon. It is also possible that not enough time has passed for the development of malignant disease in these cases, since Roentgen treatment has been discontinued.

It is my aim to deal with this subject fairly and honestly, and I think that surgeons should place on record any cases in which malignancy has developed after thorough Roentgentherapy, but in each instance the details should be sufficiently investigated and recorded to show that the treatment was properly given, for we all know that, just as many operations are done by incompetent men, so too Roentgentherapy is given by incompetent men, or with improper technic, and this fact should be weighed in the consideration of the likelihood of the development of malignancy in these cases of fibroid.

COMPLICATIONS ARISING DURING TREATMENT.

There is little reference in literature to the complications that arise during Roentgentherapy, but there is nothing to prevent an operation if a complication does arise during the course of treatment. Generally the patient's hemorrhage will have been controlled, she will be less anemic, and she will stand an operation better than before the Roentgentherapy. In one of the cases which I have treated, the patient had been extremely anemic from hemorrhage; the fibroid extended to the umbilicus; amenorrhea was produced and the tumor was reduced to the size of an orange, when she developed symptoms of pelvic abscess. This demanded an operation, which was done at a time when the patient was in much better health than before Roentgentherapy. There was no trouble in the healing of the wound, the preliminary X-ray treatment had done nothing but good, and she recovered completely.

In the case of a more recent patient referred to me by Dr. McGlinn, there were symptoms of pelvic abscess at the beginning of treatment. Dr. McGlinn considered resection inadvisable and treatment was begun. Within a week after the first series of doses were given the abscess showed signs of pointing in the vagina. This was incised and drained by Dr. McGlinn, which was a simple operation from which the patient made a good recovery, and she responded to the treatment of the fibroid in the usual way, making a permanent recovery lasting these three years. This patient could not be operated upon, according to Dr. McGlinn's judgment, at the beginning of treatment.

VISCERAL ADHESIONS.

The fear has been expressed that the visceral adhesions might form as the result of Roentgentherapy, which would make an operation difficult should such an operation become necessary later. Such effects upon the abdominal tissues have never been proven. In fact, the Roentgen rays are frequently used to cause the absorption of fibrous tissue, inflammatory exudate, or adhesions. This effect of the rays is being employed at the present time in the war zone to cause the absorption of the exudate and adhesions which have formed as a result of wounds or inflammations resulting from wounds. As evidence against the argument as to the formation of visceral adhesions, Case cites the following record: (7) A patient, age 62, was referred for treatment because of extensive carcinoma involving the prostate. In

ten months, nine series of X-ray treatments were given, crossfiring upon the diseased area. The malignant disease had involved the bowels, and a colostomy became necessary. These nine series amounted to approximately 6,000 X-units which were measured under filter. This was sufficient dosage and continued over a sufficient period of time to have produced adhesions, if this were likely, and is as much treatment as is likely to be given in any case of fibro-myoma. For instance, in group 3 of Gauss' collection, (3) which gave the best results and in which the most treatment was given, the dosage amounted to from 500 to 1500 X-units, which is less than one-fourth the amount of treatment that was given in this case reported by Dr. Chase. At the operation, at which colostomy was done, the appearance of the intestines was noted with great interest, to discover if possible adhesions as a result of the Roentgenization. The small bowel was entirely free from adhesions. The iliac colon was adherent near the ileo-pelvic junction, but in a manner very commonly seen at operation in patients who have never taken any Roentgen treatment. Just below the pelvirectal junction the bowel was found tightly adherent, the adhesions being confined to an area not larger than a pigeon's egg, accurately coinciding with the site of the carcinoma. Proctoscopic examination of the adherent area showed an annular constriction with some ulceration of the carcinoma which bled easily on being touched. A colostomy was performed in the usual manner. Dr. Case concludes, therefore, that there is no justification for the assumption that adhesions will form as a result of Roentgentherapy, which would make a subsequent operation more difficult.

Fraenkel (8) found in 75 per cent. of all cases where there had been adhesions of the genital organs, that they had improved or entirely disappeared after Roentgen treatment. Firmly fixed uteri become moveable, thick bands in the parametrium become softer and less prominent, and bands in Douglas' pouch could no longer be felt when placed under tension. In one case a firmly adherent ovarian cyst became moveable. He explains this retrogression of adhesions under Roentgen treatment as being partly mechanical, the myomata as they decrease in size losing the adhesions by traction. In other cases it must be admitted that there is a reduction of the adhesions by the direct action of the Roentgen rays. This was particularly true in adherent uteri and peritoneal

tuberculosis, and, in some cases, the retrogression of the adhesions was confirmed on laparotomy.

ADVANTAGES AND DISADVANTAGES OF THE TREATMENT.

The *advantages* are: 1st. It is painless; 2nd. It avoids the shock of an operation; 3rd. It preserves to a certain extent we believe the internal secretions, which are lost in a complete oöphorectomy; 4th. It does not interrupt the usual habits; 5th. Confinement in a hospital is avoided; 6th. In the hands of a skillful operator, it is without risk; 7th. The menopause is brought on gradually when necessary; 8th. The amount of treatment can be graded to the needs of the patient; 9th. In certain cases the rays can be confined to the tumor which involves the body of the uterus, and by protecting the ovaries sterility is avoided, and the patient is capable of bearing children, as is shown in a case reported by Dr. McGlinn and myself (9).

The disadvantages of the treatment are: 1st. The prolonged course of treatment that is usually necessary. This will usually vary from three to six months, but since the patient is only required to take the treatment for a few days at intervals of a month, this is not a hardship, especially since the patient at all times can go about her usual duties and take an interest in her usual affairs. 2nd. There is danger to the overlying tissues if the rays are not properly applied. By careful attention to the technic and exact measurement of the skin dose, this can be eliminated. 3rd. It is claimed to be more expensive than operation. In a sense this is true. However, if one considers that by this treatment the expense of board and hospital care is eliminated both in the case of charity and private patients, and in both instances they can go about their usual duties, I believe that we must conclude that it is not more expensive.

THEORY OF THE ACTION OF THE RAYS.

The results obtained in the treatment of uterine fibromata were originally supposed to be due entirely to the action upon the ovaries on the same principle by which castration would sometimes bring about relief, and on the same principle that the fibroids will disappear sometimes after the menopause. Undoubtedly part of the effect is due to the action of the rays upon the ovaries, reducing their irritability, and as a result the congestion of the uterus and the nutrition of the fibromata are decreas-

ed, but I believe that the greatest effect of the rays is upon the tumor itself. There is no reason why the action of the rays should not reduce this type of tumor just as it tends to reduce every other type of tumor. To prove that the action of the rays upon the tumor alone can cause the disappearance of the fibroma is shown in the case reported by Dr. McGlinn and myself (9). Briefly the case is as follows:

Mrs. E. C., age 24, primipara. At operation on May 19, 1915, a myoma the size of an orange was found growing from the posterior wall of the uterus, completely filling the hollow of the sacrum. The tumor was soft and apparently not encapsulated, and it was impossible to remove the tumor except by hysterectomy. The patient was pregnant. After consulting with the husband and parents, it was decided not to interfere with pregnancy and to deliver her, if she went to term by Cesarean section, if the tumor interfered with normal delivery. Fortunately she aborted, one week after the operation, an anacephalic monster. She made an uninterrupted recovery from the operation and the miscarriage, and left the hospital in three weeks. She was next seen by Dr. McGlinn, September 22, 1915. The uterus was anterior and well involuted. The tumor on the posterior wall was only slightly smaller than when last seen. A small fibroid nodule the size of a walnut was also found at the left uterine cornua. This growth was not noticed previously. Because of the anxiety of the patient to have children she refused hysterectomy. After consultation Dr. McGlinn and I decided to try to protect the ovaries and confine the Roentgentherapy entirely to the uterus. In brief, the tumor disappeared without cessation of the menses. The patient became pregnant, and was delivered of a normal child.

This case is instructive in many respects. In the *first* place it proves the possibility of treating uterine fibroids involving the body of the uterus without sacrificing the uterus, and thus avoiding sterility: 2nd, it proved that the rays can cause the complete disappearance of the tumor; and 3rd it proves that the action of the rays is chiefly upon the tumor, for it must be remembered that the menses were not affected during the entire treatment.

IDIOPATHIC HEMORRHAGE.

There is no group of cases in gynecology which yield such brilliant results from deep Roentgentherapy as the idiopathic hemorrhages. This is especially true with reference to the climacteric hemorrhages. In many cases, in which the hemorrhage has been continuous over a long period of time and in which repeated curretment has been done without permanent relief, a single course of Roentgentherapy produces a permanent amenorrhea. Even in young

subjects who have been curretted one or more times without stopping the excessive menstrual flow, or even an intermenstrual flow, a single course of deep Roentgentherapy may produce a temporary amenorrhea. In some instances, several courses or series of treatments are necessary to produce the desired results, but I am convinced that this class of patients are particularly sensitive to radiation, whether it be from the Roentgen rays or from radium. Therefore, when one is dealing with a young patient in the child-bearing period, who had been curretted one or more times without success, and is referred for deep Roentgentherapy, one should give only a moderate amount of treatment. I would say through only two or three portals of entry—unless the hemorrhage is so severe that life is endangered, in which case one must consider first the life rather than the sterility. An illustration of the latter type is that of a hemophiliac in which the hemorrhages have, on two recent occasions, almost exsanguinated the patient. Repeated currettment had accomplished nothing. In this instance, I believe we are justified in treating sufficiently to produce a permanent amenorrhea, and do it quickly. When the hemorrhages are not too severe, one can give small doses, or rather a small series, and repeat often enough to produce exactly the desired results; in other words, to cause a return to normal menstruation. Persistent bleeding after two or three courses of deep Roentgentherapy should lead to the strong suspicion of carcinoma.

UTERINE CARCINOMA.

Carcinoma of the uterus should be operated upon if the disease is discovered in the operable stage, and there are no contraindications to operation, but in every way of malignant disease the operation should be followed by deep Roentgentherapy. If the disease is too far advanced, if complications exist which prevent an operation, or if operation is refused, then the best chances are obtained by the combined use of radium internally and extensive Roentgentherapy externally. In the advanced cases one may expect amelioration; in earlier cases, possibly a cure.

Graff (10) has treated 102 carcinomata in all, 6 with mesothorium or mesothorium and radium, 73 exclusively with radium, 23 with radium and Roentgen rays. This combined treatment gave very good results. Of these cases 21 were clinically operable, 21 were recurrences, leaving 60 inoperable cases. From the clinical observations of the cases he concludes that with radium, and especially in combination with intensive Roentgen treatment, great improvement can be secured in operable cases, much more improvement than has ever before been obtained by any other method. Many inoperable cases have been rendered operable, and sometimes improved to such an extent that a diagnosis of carcinoma could not be made by examination, but there may be recurrence after such apparent recovery.

Wertheim's clinic still advocates using Radiotherapy only on inoperable carcinomata and on operable ones only when operation is, for some reason impossible, or is refused.

Greber (11) reports his experience in 100 cases of carcinoma, 84 of the uterus and 16 of the breast, treated with Roentgen and mesothorium rays. Of 59 inoperable cases of carcinoma of the uterus, some of them treated with mesothorium and some with the Roentgen rays, fourteen were cured, (that is, no carcinoma could be demonstrated clinically), fifteen died, five withdrew from treatment, five grew worse, and the remaining twenty were most of them markedly improved. Of 100 carcinoma patients, not less than thirty-two seemed to be cured at the time of report.

Flautau (12) advocates substituting radiotherapy for operation, even in operable cases of carcinoma of the uterus. Since December, 1913, he has not performed a radical operation for carcinoma of the cervix. After an experience of a year and a half he believes that beginning foci of cancer are entirely destroyed by radium or Roentgen treatment. He has never seen a case in which either radium or Roentgen rays had a stimulating effect on cancer growth, and does not believe that such effects are ever produced.

During the period mentioned he has had a

greater number of recoveries than he had with an equal number of cases during the same period of time when he was performing radical operations. His mortality with operative treatment was about 12 per cent. He thinks that even metastases in the glands may be destroyed by intensive irradiation of the whole contents of the pelvis with hard Roentgen rays. At any rate, radiotherapy should be given a chance to show what it can accomplish, which cannot be done if only inoperable cases are treated with it. The only final way of deciding between surgery and radiotherapy is to compare a large series of cases treated by the two methods after the lapse of many years, to exclude the possibility of recurrence.

In general I believe that we may expect improvement in carcinoma of the uterus in practically all cases, especially if the Roentgen rays are combined with the use of radium in the uterus or in the vagina. In some cases we may obtain complete disappearance of the symptoms, and in a few perhaps a cure.

POST-OPERATIVE TREATMENT OF CARCINOMA OF THE UTERUS.

Undoubtedly the greatest field of the Roentgen rays in gynecology is in this class of patients, and it is the field that has been less developed and less appreciated than any other. The laity, as well as the physicians in general, realize how likely the disease is to recur in cases of operation upon carcinoma of the uterus. Everyone who has been a close observer has noticed the effect of the Roentgen rays upon carcinoma, and the disappearance of primary lesions and of recurrences. This being true, it is quite rational to expect the disappearance of the small lesions that may be left behind after operation, and which lead to recurrences, providing the rays are used thoroughly after operation. This post-operative treatment should be given just as soon as the patient is able to go to the X-ray laboratory for treatment, and the treatment should be given with the same thoroughness as if one knew positively that malignant disease remained behind. Cross-firing should be used sufficiently to cover all

the areas likely to be involved by the disease. In a very early case, probably less treatment will be needed than in the advanced cases, but in advanced cases one cannot be too thorough. In these advanced cases, if this disease has already extended beyond the areas which one treats with the Roentgen rays, one must not expect recovery. I would like to make a plea for post-operative treatment, in the strongest terms possible, in every case of malignant disease.

DYSMENORRHEA AND CHLOROSIS.

Dysmenorrhoeic disturbances are frequently accompanying phenomena in young girls suffering from chlorosis. These disturbances which have been treated rather ineffectually with iron preparation, Fraenkel (13) states he has influenced rather successfully with X-rays. He has employed the stimulating rays to the ovaries in five cases and was able, by this alone, to raise the hemoglobin of these patients from 48 to 78 or 80 per cent., and in two cases even to 85 per cent. This offers a new field to X-ray therapeutics which the author believes will be of considerable value.

TECHNIC.

The technical object of the treatment is to get as much of the rays into the diseased area as is possible in the shortest period of time without damaging the overlying structures or causing any harm to the patient. Each *dose* of rays consists of the amount of treatment given through any portal of entry, whether this portal of entry involves the entire abdomen or only a very small portion of the abdomen. The *dose* is limited by the toleration of the skin, and the first and most serious effect of the rays are upon the skin, for no matter how much protection is used the skin receives the greatest amount of rays. As a rule, to give any particular *dose* of rays in deep therapy, I employ a Coolidge tube, excited by a transformer using five milliamperes of current, a nine inch parallel spark gap with a focal distance of eight inches, or its equivalent, for eight minutes using six millimeters of either aluminum or its equivalent of glass. If a stimulat-

ing dose is desired one should only use one-fourth this amount of rays.

Portals of Entry.—The deep effect is increased, generally, proportionate to the number of portals of entry or amount of crossfiring. One must limit this, however, because of the expense and because of constitutional effects. In the treatment of fibroids of the uterus, the number of portals of entry will depend in great part upon the size of the fibroid. A large fibroid requires more portals of entry than a small one. With a small fibroid or in cases of climacteric hemorrhage probably four to eight portals of entry will be sufficient, while with a large fibroid one can use twenty or more portals of entry to advantage. The duration of any course of treatment given in any month will depend upon the number of portals of entry and the general condition of the patient. We rarely give more than four doses on any single day, and usually allow at least one day's interval before adding more treatment. In some cases, especially the highly neurotic, it is inadvisable to even give four doses, and one must limit themselves to one or two doses. A course of treatment, therefore, will cover a period of from one to ten days. The interval between each course of treatment should be one month. The number of these courses of treatment will vary with the conditions treated, and in fact will vary with each individual case. Large fibroids require more treatment than small ones. Climacteric hemorrhage requires the least. Uterine carcinoma requires most, and in the case of uterine carcinoma one must give treatment at longer intervals, even after all evidence of diseases has disappeared, for it is well known that carcinoma cells may become encapsulated by the rays, and later break through their capsule and give rise to a recurrence, unless the treatment is followed up by further treatment. The skin is protected by the filtration, by pressure effects on the skin when this is practicable, and by the application of Dodd's lotion consisting of

Pulv. Zinc, Oxide, Dr.....	4
Glycerine, Fldr.	1
Phenolis, Min.	30
Aq. Calcis, (Fresh) Fl. oz. . .	8

CONCLUSIONS.

With reference to Roentgentherapy in gynecology, one is justified in drawing the following conclusions:

1st. Roentgentherapy is a useful adjunct in gynecology.

2nd. There should always be a close co-operation between the gynecologist and the Roentgenologist. In this way only suitable cases will be treated by Roentgentherapy, and Roentgentherapy will be used in all cases in which it is suitable. Complications can be dealt with when they arise, mistakes in diagnosis can, to a great extent, be avoided, and the actual value of the treatment can be definitely determined.

3rd. Roentgentherapy gives brilliant results in the obstinate cases of idiopathic hemorrhage, excellent results in suitable cases of uterine fibroid, and improvement and occasionally a cure in uterine carcinoma.

4th. Post-operative deep Roentgentherapy should be used in every case operated upon for malignant disease.

REFERENCES.

1. Deutsch. Die Radiotherapie bei Gebärmuttergeschwülsten. Münchener medizinische Wochenschrift, Sept. 1904, pp. 1646.
2. Krönig. American Journal of Obstetrics, New York, 1914, vol. 59, pp. 205.
3. Gauss. British Medical Journal, September 26, 1914, 531.
4. Shoemaker. Jour. Am. Med. Ass., May 15, 1915, Vol. LXIV, pp. 1653-1654.
5. Miller. The Relation Between Sarcoma and Myoma of the Uterus and Its Bearing on X-ray Therapy of Uterine Myoma.—Surgery, Gynecology and Obstetrics, 1913. Vol. XVI, No. 3, pp. 315.
6. Tracy. A Report of One Hundred Consecutive Cases of Fibromyomata Uteri Subjected to Operation.—Jour. of Amer. Med. Assn., Oct. 21, 1916, Vol. LXVII, pp. 1213-1216.
7. Case. Surgery, Gynecology and Obstetrics, 1915, Vol. 21, No. 1, pp. 70-78.
8. Fraenkel. Zentralbl. f. Gynäk., 1913, XXXVII, 1570.
9. Roentgentherapy Successful in Uterine Fibroid Without Affecting the Ovaries.—The American Journal of Obstetrics and Diseases of Women and Children, Vol. 76, No. 2, 1917.
10. Graff. Ref.—Über die bisherigen erfahrungen mit Radium und Roentgenstrahlen bei der Krebsbehandlung. Strahlentherapie, 1915, Vol. V, pp. 627.
11. Greber. Strahlentherap., 1915, Vol. VI, pp. 193.
12. Flatau, S. Should Operable Carcinomata of the Uterus be Treated? Dürfen wir operable Uteruskarzinome ausschliesslich bestrahlen? Zentralbl. F. Gynäk., 1915, XXXIX, 611.
13. Fraenkel. Zentralbl. F. Gynäk. 1914, Vol. XXXVIII, pp. 932.

TRANSACTIONS

OF THE

Clinical Society of the University of Michigan

Stated Meeting, April 3, 1918

The President, JAMES G. VAN ZWALUWENBURG, M.D., in the Chair
 Reported by REUBEN PETERSON, M.D., Secretary

REPORT UPON THE CLINICAL SYMPTOMS AND ANATOMICAL FINDINGS
 IN THREE CASES OF ORGANIC
 BRAIN DISEASE SHOWING
 DISTURBANCES OF AN
 APHASIC AND AG-
 NOSTIC TYPE.

ALBERT M. BARRETT, M.D.

(From the Psychopathic Hospital, Ann Arbor, Michigan.)

At a meeting of this Society in November, 1913, I presented a patient who showed an aphasic disorder of speech. This case was reported in detail in Volume V of the Transactions of the Clinical Society of the University of Michigan. Since that time the patient has died and we have had an opportunity of studying the pathologic condition that was responsible for the interesting disturbances of speech.

The essential facts of the symptomatology and course may be briefly recalled in this connection. The patient was a woman who, previous to an attack of apoplectic form character, at the age of 57, had been regarded as one somewhat above the average in intelligence, and whose health had usually been good. The apoplectic form attack was transitory in its effects and after a few days she seemed as well as ever. She performed her household duties acceptably until the spring of 1913. At that time there was a very notable impairment in her general efficiency and particularly there was a marked disturbance of her memory. She was abnormally irritable and occasionally made strange remarks that suggested delusions. Whatever difficulty may have been present in her speech at this time did not attract as much attention as did the general mental let-down and it was for this that she came into the Hospital. A summary of the large amount of

material obtained in the examinations of the disturbances of speech shows the following: On the receptive side of speech, she understood simple requests and commands but failed in whatever was complex or when several sentences were given in sequence. She would correctly pick out familiar objects that had been named to her. She recognized objects from their sounds and could name most objects that were shown to her. She could read the separate letters of the alphabet and could pick out her name, but was totally unable to read even short sentences. Recognition of objects by touch was unimpaired and a number of substances that were tasted were correctly identified. On the emissive side of speech, the disorder was most striking. There was little spontaneous speech. She would answer questions and occasionally volunteer a brief conversation. Sometimes she could read the alphabet correctly but more often she would stop before it was finished and make no effort to go further, seemingly forgetting what she was trying to do. Sometimes numerals would be intermingled among the letters. The same difficulty occurred in counting. Spelling of words of a few letters was often correct but with longer words she usually failed. Often the number of letters given was approximately right and sometimes the wrong letters had resemblance to those that should have been given. e. g. Tree was spelled t-r-o-o. Michigan, M-i-g. There was no paraphasia in spontaneous speech or in repeating from dictation. Perseveration was rather frequent, especially when she was fatigued. She was totally unable to write. She usually began a task as though she might be able to carry it through but her production had no resemblance to the letters desired. She seemed to have no understanding of gestures or, if she did understand them, she

could not transfer their meaning into the proper action.

There was a suggestion of an apraxic difficulty in executing commands. There was a marked delay as if she were puzzled how the action was to be done. When asked to point to her nose with her right hand she looked at her right hand, moved her arm apparently with some purpose and then placed her hand on her knee and made no further effort. Actions more complicated than this were rarely done correctly.

She understood the use of objects and, while there was usually some difficulty in using them, her actions with these were fairly correct. The main difficulties chiefly concerned the elaborative aspects of speech. In a large measure these were explainable by the profound memory disturbance that was present. There was a marked defect of intelligence. This was seen in her dullness, her loss of interest in the care of her person, and a considerable degree of emotional deterioration.

A summary of this speech impairment showed that there was preserved understanding of the simpler forms of language but impairment of anything that was at all complicated. There was a total alexia, or inability to read. Recognition of objects was preserved. There was no paraphasia. Repetition from dictation was impaired. There was some perseveration. Spontaneous speech was reduced in amount and there were gross errors in spelling.

Clinically, this type of speech disorder closely resembled what has been described as transcortical aphasia, a disturbance of speech in which the difficulty lies largely in the field of elaboration. Such a condition as this is more commonly observed in conditions of diffuse brain atrophy, especially where this involves regions concerned with the functions of speech or paths radiating to and from these. In rare instances, the same results might occur from focal lesions closely bordering the stations for the receptive or emissive functions of speech.

There were present during the clinical course of this case definite evidences of a diffuse disorder of the brain cortex. Such were the emotional dullness, the emotional impairment, and the general intellectual deterioration.

The patient was transferred early in 1914 to the State Hospital at Kalamazoo. The examinations at that institution noted the same disorder that had been found in the hospital at Ann Arbor. Deterioration advanced grad-

ually until she became helpless on account of her general mental weakness. Without any definite apoplectic insult she developed an inability to use the right leg in walking. Her deterioration reached a most extreme degree. She finally became unable to stand alone. While in bed the legs were flexed and her head held stiffly. Gordon's and Oppenheim's reflexes were present in both feet. The pupils were irregular and sluggish in their reaction. There was slight internal strabismus of the left eye. Towards the last the muscles of the body would twitch whenever she moved. Death occurred in February of 1916 from broncho-pneumonia. The entire duration of the disease was about three years.

The examination of the brain showed it to be strikingly small. Its weight was 1130 grams. There was a fairly large cyst of an old internal hemorrhagic pachymeningitis covering the convexity of both hemispheres. Part of the contents of the cyst was from a rather recent hemorrhage.

The hardened brain showed the effects of a lateral compression from the cyst. The convolutions in general were very small, and in the parietal and frontal regions were somewhat flattened. The speech areas did not show more marked gross changes than other regions.

Microscopic examination showed extreme atrophy of the convolutions and the presence of numerous miliary plaques such as are characteristic of senile brain atrophy. The nerve cells showed severe degeneration. Many were sclerotic and generally they were overloaded with fatty pigments. Many nerve cells showed degenerations of the neurofibrils. These were thickened and formed whorls and tangles of the type rather frequently found in connection with the formation of plaques.

The age at which the process occurred, namely 57, as well as the prominence of the changes among the neurofibrils, show that this case was one of the premature forms of senile brain atrophy, known as Alzheimer's Disease. The speech disturbance thus finds its explanation in a diffuse rather than a focal lesion, a finding that is usual for most cases of transcortical aphasia.

A CASE OF TACTILE AGNOSIA.

The case is that of a man, R. H., S. P. H., No. 2238. At the age of two he had a severe fall and fractured both shoulder blades. He was not unconscious at the time. He was backward in mental growth, not talking until the age of six. About this time, he entered school but his progress was slow. At the age of nine, he was placed in the

state school for the feeble-minded but after a brief time was taken home and again placed in the public schools. At the age of twelve, he had only reached the third grade. As it was supposed that his backwardness was due to some head disorder, at the age of twelve, a trephine operation was made in the left parietal region. He appeared brighter after this but did not return to school. At fifteen, he started to work in a factory. He continued to work successfully, receiving good wages, until he was twenty-seven. He then began to complain of a tight feeling in his head. He grew more dull and at times there were periods of unconsciousness. There were also periods of confusion in which he would wander away and there was amnesia for all that happened during that time. A second operation was performed in June of 1916. In this a large button of bone was removed from the upper part of the left parietal region. Three days after the operation, there developed a paralysis of the right hand and face. Mention was made by his friends of his inability to speak correctly at this time. The paralysis of the hand and the speech disturbance passed off after a week but there developed attacks of Jacksonian epilepsy. For about a year, these occurred about once each week. During these attacks, the right side of the body and the right arm and the face were contracted and jerked violently.

There was usually some mental disturbance associated with these attacks. Recently, the attacks have been more severe and in many of these he bit his tongue and was definitely unconscious.

He entered the Psychopathic Hospital in February of 1918, at the age of 30. Here, he was dull and disinterested in his surroundings. He gave a fair account of his past experiences and description of his attacks. He was usually irritable and complained much of various somatic discomforts.

The neurologic examination showed a circular defect in the bone of the right and left parietal regions, marking the place of the two previous operations. There was a marked dysarthria in the spontaneous speech and with test phrases. There was slight atrophy of the muscles of the right lower arm, the circumference of this arm being about one inch less than the left. The left grip measured 34 on the dynamometer, the right 12. He complained of the right hand being cold and the skin of the hand was shiny and the volume of the muscles was less than on the left side. There was no disturbance of sensibility of the left arm or hand. In the right hand, he appreciated light touch, pain and position sensations, but these reactions were far less keen than in the left hand. At times, following mild degrees of unclearness, all qualities of sensation seemed to be absent in this hand but when mentally clear these reactions were present to a considerable degree. At no time was there any ability to name or identify objects placed in the right hand. When a knife was placed in this hand, he would usually remark that he did not feel anything. Similarly, he failed to name or identify keys, a watch, pencil, or pen. Whenever these objects were placed in the left hand, they were correctly recognized and correctly named.

On one day he complained of peculiar feelings

of numbness that passed every few minutes along a narrow strip up his back and out over the shoulder up to the defect in his head. At times there were involuntary contractions of the muscles of the right hand and often he spoke of this arm and hand being numb. There was slight spasticity of the right leg. Both knee jerks were increased and Babinski's reflex was present in the right foot.

These various disturbances were present during the entire period of observation. On the 10th he had a severe convulsion. This began without warning. The head was slowly drawn to the right and the right angle of the mouth was drawn downward. The fingers of the right hand were clenched and this arm was slowly flexed and moved across the body. After a brief period of fixation in this attitude, rapid clonic movements spread over the entire body. These were followed by relaxation and a period of stupor lasting about fifteen minutes. Two days later he had five convulsions. On the day following there were sixteen convulsions and on the next day convulsions followed one another at very brief intervals. During this last three days, he was continuously unclear. Death occurred during a convulsion.

A partial autopsy was held shortly after death, the head alone being examined. The scalp was firmly adherent about the edges of the defect in each parietal bone. In the right parietal region, there was a circular defect in the bone, about 3 cm. in diameter. This had been closed in by a dense membrane. The dura mater in the region of both defects was firmly adherent to the bone and beneath the defect on the left side it was densely adherent with the underlying brain substance. The brain tissue was soft and flabby and flattened under its own weight. The veins were slightly filled. There was no arteriosclerosis.

After fixation, a more detailed examination of the brain was made. The brain substance lying beneath the defect in the left parietal bone was torn and firmly adherent to pieces of the dura mater. The limits of the area affected were rather difficult to sharply outline by reason of the softened character of the tissues. It lay within the lower half of the posterior central convolution, involving the extent of about three-quarters of an inch of the convolution. The anterior central convolution was not involved and it could be easily separated away from the dura and then showed no defect.

Of particular interest in this case was the lack of ability of the man to recognize and identify objects that were placed in his right hand in spite of the preservation of the perceptions of touch, pain and muscle sense. Such a disorder has been designated astereognosis. This condition has always been one of much interest from the standpoint of localization and interpretation of the psychic features that were involved in the process. The disorder is essentially an inability to form a correct concept of the object, even though the elementary sense qualities, such as touch, muscle, sense and pain, furnish information. It, therefore, is a disorder of association, a disturbance of the synthesis of elementary sense qualities into a concept. An interesting question is whether the disorder is one of associations between the differ-

ent sensory elements themselves or between these elements as a whole and areas of the cortex in which are stored memories of other sense perceptions, such as visual, auditory or possibly other special sensations, the inter-relation of all of these being essential for the awakening of the idea of the object. Such a disorder would be produced by a lesion cutting off the central convolutions from the occipital or temporal areas of the brain.

On this point, our case furnished no conclusive information. The localization of a lesion to produce disorders of this type always lies back of the central fissure. This lies either in the posterior central convolution in the middle third or in the parietal region where it may cut across association paths between the receptive areas for the sensations of touch, pain and temperature and the region concerned in visual impressions. In the case under discussion, the lesion involved the cortex and closely adjacent white substance of the lower part of the middle third of the left posterior central convolution.

It did not seriously disturb the anterior central convolution. It did not seem deep enough to cut across the deeper association paths with the visual areas and its effects seem rather to be among the areas of primary sense perception. However, it does not definitely prove this.

The close proximity of the lesion of the head area at the lower end of the central convolution may explain the involvement of the head and face, symptoms which were present during the early part of the course, and may also explain the aphasic difficulty that was noticed for a brief period.

A CASE OF MOTOR APHASIA.

The case is that of a woman of average intelligence, who could read and write. At the age of sixty, she had a sudden attack of faintness. A few days later she had difficulty in talking. She could not recall the word she wished and in her speech many words were used incorrectly. Although she recognized members of her family, she could not speak their names. This difficulty with speech increased, until her speech was limited to replies of "yes" or "no" and a few familiar words. During this time she was somewhat more dull than formerly, but she was able to do her housework acceptably.

She was admitted to the State Psychopathic Hospital in November, 1917. The physical and neurologic examinations showed slight enlargement of the heart to the left. The blood pressure was 140. The gait was unsteady, and she swayed in Romberg's position. There was slight asymmetry of the face. The pupils were irregular in outline but the light reactions were not impaired. In both feet there was a slight dorsal flexion of the great toes. There were no paralysis or sensory disorders.

There was no spontaneous speech. She understood all that was said to her, but her replies were limited to a few words, always spoken with difficulty and in low tones. She gave her age and her name, but to most questions there was no response at all, or sometimes she would repeat the question. When asked if she knew the correct answer, she nodded affirmatively. Efforts to have

her read were without success. She would take the copy, look at it and make no response.

While usually mildly stuporous, she would rouse during examinations and show a fair interest in what was being done. This stupor increased rapidly until, one week after admission, she became unable to feed herself and was too feeble to stand. There was no longer any spontaneous speech, but her reactions all showed correct understanding.

Neurologic symptoms became more marked. The right arm became paralyzed. A well marked Babinski reflex was present in the left foot but not on the right. On several occasions she vomited. The Wassermann reaction was negative on the blood. Unfortunately, there was no examination of the fundus.

Her stupor deepened and death occurred nineteen days after admission.

The autopsy showed evidences of increased intracranial pressure and the left hemisphere was more voluminous than the right.

After fixation, section of the brain showed a tumor mass occupying the subcortical white area and much of the overlying cortex of the anterior two-thirds of the Island of Reil. Anteriorly the area reached into the posterior part of the left third frontal convolution. It very definitely infiltrated into the subcortical parts of Broca's area. Its internal border extended along the outer margin of the claustrum. Externally, it infiltrated the pia of the Island, and had a small extension into the tip of the first temporal convolution. The posterior part of the first temporal convolution as well as its connections with the Island were not involved.

The tumor was found to be a glioma. It was of an infiltrating character and in several places there were cysts filled with products of disintegration.

In summarizing the disturbance of speech, it is found that this entirely concerned the emissive functions. These were not entirely abolished but were very severely impaired. Understanding of spoken language was preserved. Her ability to read was abolished. Clinically, it corresponds very closely to the motor types of aphasia.

DISCUSSION.

DR. MAX PEET: I recently had one case which showed beautiful asteriognosis. This was a boy whom Dr. Darling had about two years ago with a tumor on the left side pretty close to the median line in the post central gyrus. At the first operation this was diagnosed as sarcoma. At the second operation it was diagnosed endothelioma. His asteriognosis did not clear up after the first operation. Another case recently showed one of the other symptoms which Dr. Barrett has mentioned, a case of injury to Broca's area. This was a boy with endothelioma which grew down from the dura, but had not invaded the cortex at any point. This was purely a question of injury to the motor speech center from pressure without. This boy did not have the complete motor speech loss. If you asked him how old he was he would start counting, one, two, three, four, five, six, six, six, eight, ten eleven, and could not go beyond that. If you helped him out and said twelve he would say yes, but could

not go beyond. If you said nineteen, twenty-two, etc., he would shake his head. When the number twenty was mentioned he would say yes, as this was his age. At times he could count farther than at other times. This was before we removed the tumor. His hearing was perfectly good, he understood every word you spoke to him showing that the posterior part of the speech area was intact. And his associations were all right. His only trouble lay in his inability to go beyond a certain line. On the other hand, he could say expressions which he had been in the habit of saying for a long time. He could say, "O dear." Very often he said this when something bothered him. Some of these patients cannot say a word but they can swear beautifully. Then we had another case which illustrated an injury to all three of these areas. The man had paralysis on the opposite side also. He could see perfectly well. There was a question whether he could hear but he could not say a word or understand a word, and yet could understand any motions. He had some optic atrophy and we had difficulty in telling whether he had visual aphasia. We submitted to him a newspaper with enormous headlines, "Kaiser asks for peace." I knew any individual who would get the visual meaning of that would show some interest. He showed none. These particular cases of Dr. Barrett it seems to me, are especially interesting because they bring out so clearly the possibilities we have in brain localizations, and the aphasias and asteriognosis are very important in cerebral surgery, giving us very definite information as to the location of many tumors. Fortunately many of my cases have been cases in which the tumors have been on the surface, although most of the cases are gliomas below the surface. Decompressions would prevent loss of sight and relieve pressure, but would not relieve the symptoms, but rather make them worse if the function was not entirely lost.

I am rather at a loss to say why any simple operation such as the one described by Dr. Barrett should leave asteriognosis or any other marked lesion in the brain cortex. If the dura is opened and brought together again we do not expect trouble from adhesions. On the other hand, when we do a decompression and remove the bone the adhesions between the brain cortex and overlying muscle very seldom give paralysis or loss of sensation below it.

DR. THEOPHIL KLINGMANN: I would like to call attention to the fact that these cases are of unusual interest because they are clear-cut, both clinically and anatomically, and for that reason are of great help in correlating the symptom complex with the anatomical changes. These cases are very satisfactory and for that reason are very encouraging in this line of work. The tendency to correlate mental symptoms with anatomical lesions has met with some success and appears more hopeful as far as solving many of the clinical manifestations on an anatomical basis.

DR. L. H. NEWBURGH: I would like to ask Dr. Barrett if there is usually some other lesion in this precocious senile dementia i. e. if there is any renal or cardiac disease and general atrophy? I ask this because every now and then there are

cases of precocious arteriosclerosis described that primarily involve the heart and kidneys. I was wondering whether there is any connection between such cases and the case described here. Might it be the same process?

DR. BARRETT: As a rule, the arteriosclerosis process occurs at an earlier period than the process of senile brain atrophy. As a rule, arteriosclerosis of the brain is associated with focal lesions such as well defined softenings or atrophies. In this case, we have a process entirely different. It is not certain as yet what the factors are in producing these peculiar plaques. In the greater part of these cases, there is a marked fatty degeneration of the cell and very commonly an increase of the glia ground-work structure of the cortex. It is possible that the plaque has its beginnings in the accumulations of products from cell disintegration in the meshes of the glia fiber. Very often, there is at the same time an arteriosclerotic disease of the brain but the process of plaque formation and that of the arteriosclerosis are quite distinct. There was little evidence of arteriosclerosis in this case. The blood pressure was 140 and at the autopsy there were no marked findings of arteriosclerosis.

DR. VAN ZWALUWENBERG: Is there an hereditary tendency in senile dementia?

DR. BARRETT: We have very little definite information on this point. Undoubtedly, there is a tendency in some families for brain atrophy to occur more frequently than in others. There seems to be a considerable amount of evidence that arteriosclerosis runs in families. One very commonly finds among patients suffering from arteriosclerotic brain disease a history of cardiac and vascular disorders among the ancestors.

REPORT OF A CASE OF TRANSVERSE MYELITIS FROM A BULLET WOUND.

CHARLES L. WASHBURNE, M.D.

(From the Surgical Clinic, University Hospital, Ann Arbor, Michigan.)

CASE No. 10278, male, age 21, German-American. Entered the hospital, February 28, 1918.

Chief Complaint.—Paralysis of left leg.

Family History.—Father living at fifty-five and well. Mother living and well, age forty-eight. Four brothers and six sisters living and well. No history of tuberculosis, heart disease, nephritis, cancer or insanity in the family. No hemophilia.

Personal History.—Measles, chickenpox, mumps. No other diseases. Neisser and lues denied. Smokes and chews in moderation. No history of previous injuries.

Marital History.—Was married at eighteen. One daughter living and well. No history of miscarriages. Wife died of pneumonia one year ago.

Present Illness.—Began December 4th, 1916. The patient's brother was showing him a new gun which he had purchased, at that time having been recently appointed to the police force. The gun was supposedly empty at the time, and the brother was about to snap it shut when it discharged, the bullet entering the abdomen at a point some four or five finger breadths above the umbilicus and three finger breadths to the left of the median line. The

bullet did not come out posteriorly. The patient immediately became stiff and was laid upon the floor to await the arrival of the police patrol which took him to the hospital. The accident took place at 6:30 in the evening. An exploratory operation was done two hours later. The liver was found to be grazed but there was no puncture of the intestines. The bullet was not removed, the patient being told that it would give him no further trouble as it was probably lodged between the eleventh and twelfth ribs near the spinal column. The patient was paralyzed from the waist down at the time of the accident but, after five weeks in the hospital, he regained complete control of the right leg. The left leg has remained almost completely paralyzed, with slight improvement. There is still sense perception in the left leg and sensation is more acute than during the first few weeks following injury. The patient remained in the hospital for nine weeks. A dull aching pain, which the patient says began at the point of entrance of the bullet, has been slowly going down the leg and is now located at the ankle. The patient's left foot feels cold to the touch. The ankle is slightly less movable than on the right. During the early period of his injury, the patient had no control of the sphincters. At the present time he has poor control of the bowel and is unable to hold urine longer than two hours. He was catheterized twice daily while in the hospital. He sleeps well during the day but is kept awake much during the night by pain in the left leg.

Physical Examination.—Pupils are central, equal and regular. The left reacts to light more readily than the right. No nystagmus, extraocular movements normal. No enlargement of the cervical glands. Respiratory movement free and equal, liver dullness about normal, no rales. Heart rate, 90. Percussion normal. There is a large scar some eight inches in length extending from a point four or five finger breadths above the umbilicus and two or three finger breadths to the left of the median line to a point on the level with the umbilicus. The incision was made through the bullet wound which is in the center of this scar. Abdomen otherwise negative. Knee jerks not obtainable. The legs are thin and show muscle atrophy of disuse. The left leg shows no muscle action.

X-ray Examination.—Reveals a bullet in neighborhood of the second lumbar vertebra. Stereoplates of this region demonstrate this foreign body opposite the second lumbar disc, apparently in the neural canal, anterior to the cord. The outlines of the centra both above and below are smooth. The posterior arches are intact. There is no evidence of injury to the bony structures to indicate the tract of the projectile. Evidently this bullet has entered from the side or through the fibro cartilage. A Wassermann taken of the blood, was negative. Blood pressure, systolic 110 m. m. hemoglobin 100 per cent. reds, 5,000,000; whites, 8,600.

March 4, 1918, operated under ether anesthetic in the Orthopedic Service. An incision was made extending from the twelfth dorsal to the third lumbar spinous processes. The muscles were carefully separated from the spinous processes and

laminae. Hemorrhage was checked by packing the wound with adrenalin gauze. The interspinous ligament was cut at the third lumbar, the spines cut with a bone forcep and turned upward. The laminae were resected and the cord coverings exposed for a distance of about two inches. The meninges between the first and second lumbar bodies were thickened. A hard substance could be felt on a level with the second lumbar vertebra deeply embedded in the posterior wall of the cord covering. Further dissection showed this hard substance to be a very much distorted lead bullet. A portion of the bullet was intimately associated with the nerve fibers of the cord from which it was removed with some difficulty. A free flow of spinal fluid followed the removal and the cord was seen to pulsate normally. No area of cord degeneration could be demonstrated. The dura was closed with No. 00 chromic catgut. The muscles and interspinous ligament were sutured with No. 2 chromic catgut, continuous sutures. Skin sutures were of silk worm gut. A small rubber tissue drain was inserted for serum drainage. Sterile dressings were applied and patient returned to bed in good condition.

Post Operative Record.—Patient reacted well from the anesthetic. Two hours temperature; 100, pulse 128, of good quality, respiration 28. For first 24 hours the foot of bed was kept elevated. For five days following operation the patient complained continually of a severe headache which was only slightly relieved by ice caps and large doses of aspirin. The morning following operation, patient had not voided and complained of pain over bladder; thirty ounces of urine were removed by catheter. The drain was removed at the end of 48 hours and the wound showed no leakage of fluid. On the sixth day the patient began to void urine normally without any dribbling. During the first week there were several involuntary bowel movements but none thereafter. There was a daily p. m. temperature of 100 to 102 for first six days. The temperature reached normal on the seventh day and remained so. Stitches were removed on the twelfth day at which time the wound was healing satisfactorily. During the third week there was severe pain in the left leg which disappeared in a few days. At present he has perfect control of the sphincters. He has been up in a wheel chair for five days and on crutches for the past three days.

Physical Examination: April 2, 1918. Left upper thigh shows three inches atrophy. No atrophy of calf. Tapping on left patellar tendon causes pain, no reflex contraction obtained. Right patellar reflex shows very slight action. No ankle clonus or Babinski on right. No ankle clonus on left. Plantar irritation gives no response whatever. Left foot and leg covered with a profuse perspiration. Patient is unable to move left lower limb. No muscle action above knee. Slight action in muscles controlling foot. The left foot assumes a position of equinus deformity. There is anesthesia to pin point along the internal surface of the left foot. No other area of cutaneous anesthesia, although sensation is much diminished over whole the left lower extremity. Incision of back well healed

showing only a few remaining crusts. Pressure sore over sacrum and left buttock nearly healed.

DISCUSSION.

DR. MAX PEET: I think Dr. Washburne is to be congratulated upon getting this bullet out without doing any more damage to the cord than had been done by the original trauma. Bullets are especially difficult to remove on account of the deformity which catches onto the adhesions, the various nerve roots and the cord itself. Personally I believe all such cases should be operated upon as soon as possible, but often a year afterwards perhaps some improvement, or complete cure can be hoped for. There are in many cases a pure paralysis due to pressure. In such cases removal of pressure will give relief. One of the great advantages of early operation comes from the relief of the tension in the cord. Experimental work has shown that, where a definite trauma would always produce a lesion from which an animal would completely recover, a slightly greater trauma would produce a lesion which would always give permanent paralysis. But when the cord was incised in the latter cases the animal would recover complete motor and sensory function. So in these early cases, the earlier the operation the better. If the cord is swollen, bluish, and non-pulsating, simple incision into the cord will often give relief. The fact that this man has not as yet recovered use of the one leg is no sign that he is not going to. Six months is the average time for improvement, and some cases show improvement for two years. I think Dr. Washburne can look for still more improvement in this case.

DR. JAMES G. VANZALUWENBURG: I showed the lantern slide reproduction of this man's radiograph at a previous meeting of this society, and I commented that I could not conceive a bullet of such size getting into the spinal canal without producing damage to the bony wall. The only way I could conceive is that it must have dodged in from the side, being deflected in the abdomen and passing in between the laminae or pedicles, and if it did, it is curious that it did not injure some of the spinal roots.

DR. WASHBURNE: This man had his bullet for fifteen months before he came here. He had entirely healed up and didn't know that he had a bullet. Now he thinks it is there. What are your indications? What would you want if you knew you had a bullet in such a place and were paralyzed? Would you want to leave it there? It might do no good, to operate, but you would never be satisfied until it was out. As a matter of fact, this bullet did not lie against the cord, but below the lower end of the cord. It evidently came in from the side, following the lamina. One portion lay right on the fibers from the cord and was in contact with the anterior wall of the spinal canal. The root fibers of the cord lay right on top of it. When the bullet was removed the spinal fluid came out after it. The main part of the bullet lay anterior to the axis of the canal.

ETIOLOGY AND TREATMENT OF DYSTOCIA OF CERVICAL ORIGIN WITH A REPORT OF FOUR CASES.

HAROLD HENDERSON, M.D.

(From the Obstetric and Gynecologic Clinic, University Hospital, Ann Arbor, Michigan.)

Dystocia as a result of a rigid cervix is a well known although relatively infrequent, obstetrical condition. To a mild degree, however, it is present in nearly all primiparous labors, but here it is physiologic and does not ordinarily require treatment. This paper is confined then to those cases in which there is a marked delay in the dilatation of the cervix.

The distinction of functional and organic rigidity is convenient but open to criticism because there probably is no true functional rigidity. In all of the cases of cervical dystocia reported here there is an organic element.

Inasmuch as the internal os is usually partly dilated before the onset of labor, the difficulty is met with the external os. Here, according to Galabin & Blacker (1), there are strong circular muscle fibers which may contract tightly and give rise to serious trouble. This is especially likely to occur in nervous women in cases of reflex irritation where there are frequent examinations or premature attempts at delivery. Fieux, quoted by DeLee (2), denies the existence of circular muscle fibers in the cervix uteri at term and ascribes all these cases to anatomic causes. While this may be so, nevertheless there are numerous cases recorded in the literature in which the cervix remained tightly contracted despite hard pains, in the absence of any known etiology.

In premature rupture of the membrane the elastic dilating wedge of the bag of waters is lost and we may get spasm resulting in poor dilatation. The cervix may become swollen and edematous and in extreme cases may even slough off. In old primiparae the rigidity is probably anatomic rather than spastic. Here the elastic tissue has been more or less replaced by fibrous tissue which dilates with difficulty.

The treatment of functional rigidity of the cervix is bound up with the treatment of organic rigidity because it is difficult and even impossible in some cases to determine which factor is more important. Whenever there is difficulty in the first stage a careful vaginal examination is indicated in order to determine the cause of dystocia. In the spastic type of rigid cervix pressure of the finger tip against the os, especially during a pain, may serve to relax the spasm and allow dilatation to pro-

ceed normally. If not, the finger may be inserted inside the os to separate any adhesions which may exist between the membranes and cervix. If this is unavailing we may administer chloral by mouth 15-30 grains which may be repeated if necessary. Morphine $\frac{1}{6}$ - $\frac{1}{4}$ of a grain by hypodermic often is efficacious in relaxing the spasm. Whether these drugs act by relaxing the spasm or not, there is abundant clinical evidence to mark them as valuable drugs in the management of a tedious first stage. Atropine alone in doses of $\frac{1}{100}$ grain or combined with morphine (3) has been recommended in this condition. Hot vaginal douches, Sitz baths, the application of cocaine to the cervix and the injection of glycerine (4) into the os have also been recommended. Our present tendency, however, it is to avoid soiling the vagina unless operative interference is indicated. If these measures are not sufficient to secure dilatation there is undoubtedly an organic basis for the dystocia and we will proceed as will be presently described under the treatment of that condition.

Organic rigidity of the cervix may be due to a variety of causes. Of the congenital malformations, complete atresia is incompatible with conception and hence needs no discussion here. Longitudinal septa in the canal from failure of complete fusion of the Mullerian ducts are not very common but may seriously obstruct labor. Congenital hypertrophy of the vaginal portion of the cervix is rather rare and usually these patients do not become pregnant. Its effect upon labor is the same as the acquired form of hypertrophy which is more common. This usually comes on during pregnancy when it grows quite rapidly. T. C. Smith (5) reports such a case in which the long thickened cervix did not dilate well. He finally applied forceps and was able to extract the child using his instruments as dilators.

Inflammatory processes about the cervix may act in two ways in bringing about dystocia. In the first place we may have a chronic endocervicitis with a fibroid deposit or we may have adhesions formed between the membranes and the lower segment of the uterus. In this condition the external os may be practically obliterated by an inspissated plug of mucus. This produces a condition known as *conglutio orificii externi*. The adhesions counteract the dilating tendency of the uterine contractions and we often get premature rupture of the membranes. This gives us an added factor in producing delay. The cervix becomes thinned but

does not dilate. We can almost always locate it by speculum as a small depressed area. Simple pressure against the external os may overcome the resistance after which dilatation goes on rapidly.

Malposition of the cervix may interfere with the normal progress of the first stage. Usually the os is deep in the posterior fornix with the anterior fornix obliterated although occasionally the reverse is the case. The etiology of anterior displacement of the cervix is usually sacculation of the anterior uterine wall due to pregnancy in a retroverted uterus. Sacculation of the posterior wall of the uterus in a case of anteversion will displace the cervix backward. This is especially prone to occur when pregnancy follows such operations as anterior fixation or interposition operations for prolapse. The treatment of this condition depends on the individual case. Occasionally expectancy is rewarded by spontaneous dilatation. If not the finger may be hooked in the external os and an attempt made to pull it forward or backward, as the case may be, into its proper position.

Syphilis has been described by Tarnier as producing rigidity of the cervix in a variety of forms, namely, the induration of the primary sore, hypertrophic mucous patches such as occur during pregnancy, gummata, tertiary ulcers and finally a diffuse sclerosis comparable to syphilitic stricture of the rectum. The majority of writers on this subject have tacitly accepted syphilis as a cause of cervical rigidity. However chancre of the cervix and secondary lesions are the only authentic syphilides which have been found in this locality and they leave no residuum. Tarnier and others who have reported these cases made their observations before the discovery of the Wassermann test and the spirochete and consequently their conclusions cannot be given serious consideration. Dr. Wile, in a careful review of the subject, finds no authentic case of tertiary syphilis of the cervix. Syphilis of the internal genitalia of the female is practically unrecognized and its role as an etiologic factor in dystocia cannot be estimated until we know exactly what lesions it produces. Undoubtedly it affects the pelvic organs including the cervix but the older methods of diagnosis have failed to reveal it so it remains for the demonstration of the spirochete to establish the true status of syphilis in obstetrics and gynecology.

New growths of the cervix, notably polyp and carcinoma, may obstruct labor. Both of

these conditions however are usually associated with sterility. Their effect upon labor and the treatment is not within the scope of this paper and will not be considered here.

We have finally cicatricial stenosis of the cervix and it is chiefly with this type of obstruction that I wish to deal. We may have scars in the cervix as the result of old lacerations, following cauterization or as a sequence to operations such as trachelorrhaphy or amputation.

The healing of old lacerations may result in the deposit of scar tissue which at a subsequent labor will not dilate under the influence of uterine contraction. Such a case is reported by Lusk (6). The patient was first seen after having been in labor for a considerable length of time. She had had one child before but there had been no operations. Examination showed that the cervix was undilated and the uterus tetanic with a well marked contraction ring. Before she could be prepared for Cæsarian the uterus ruptured and the woman died.

Strong cauterizing medicines and even the actual cautery were used many years ago for such gynecologic conditions as erosions, eversion, and ulcerations of the cervix and consequently dystocia occasionally resulted from the scar tissue. But the cervical cautery is no longer used except in the management of cancer and as a result this cause of prolongation of the first stage is no longer seen.

The effect of trachelorrhaphy upon subsequent labor is a subject which has been considerably dealt with. The consensus of opinion is that the operation properly performed will have little obstructive effect upon the character of the next labor. There are, however, several instances reported in the literature in which there was considerable dystocia and one of the cases reported here comes under this classification. Probably in these cases, as has been suggested by Mitchell (8), there has been too much cervical mucosa removed in the repair resulting in a small os. Theoretically, simple repair of the lacerated cervix should not produce dystocia. The scar which results is linear and if this has been properly covered with mucous membrane the amount of undilatable fibrous tissue will be reduced to a minimum. Leonard (9) reports ten cases of pregnancy following trachelorrhaphy only two of which had difficult labors. He quotes fifty-one additional cases collected from the literature in only six of which was dystocia encountered and rightly concluded that the operation properly performed has little in-

fluence on the cause of subsequent childbirth.

Amputation of the cervix as a cause of dystocia has been fairly extensively studied by the French but the American literature shows only one valuable contribution on this subject. Leonard reviewed the literature in 1913 and added eleven cases from the Johns Hopkins clinic. In seven of these labor was very difficult and he concludes that the operation should be avoided during the child bearing age if possible. Doleris (10), in reporting seventy-eight cases operated by himself, claims that with perfect technic the scar tissue will be reduced to a minimum and dystocia will not result. Although this may be true to a certain extent we can hardly call the technic of the Hopkins' clinic to account for the large percentage of cases of dystocia following their method of amputation.

The difficulty in dilating such an os is readily understood. The scar from an amputation is circular surrounding the os and, when it contracts as all scars do as they grow older, its tendency is to still further diminish the caliber of the canal. Normally the force of the contractions of the uterus are exerted at the point of least resistance which is the internal os. At this point only is there an absence of external pressure. This action is further enhanced by the tendency of the uterus to draw up into the fundus the fibers of the cervix. Added to this we have the hydrostatic action of the bag of waters. But the smaller the diameter of the opening the less purchase the uterus and the advancing part have upon it and if this is further reinforced by a circular band of scar tissue, severe dystocia is almost inevitable.

Amputation of the cervix has another influence which has been especially emphasized by Audebert (11) & Leonard. There is a marked tendency to abortion and premature labor. Of thirty-two pregnancies reported by the latter, 17 or 55 per cent. terminated prematurely, consequently in considering the management of these cases we must bear this possibility in mind. Both amputation and trachelorrhaphy apparently predispose the patient to sterility. This, as has been pointed out by Johnson (12), is more apparent than real because so many of the patients when operated are reaching the age when pregnancy is unlikely. Leonard has shown that the tendency to sterility is more common after amputation than after trachelorrhaphy, because stenosis is

more likely to occur when the resulting scar is circular.

The course of labor in cicatricial stenosis depends upon the amount of scar tissue present. In some cases the external os will remain small for a considerable length of time but finally the scar tissue gives way and the cervix dilates rapidly. Occasionally, as in a case reported by McPherson (13), the cervix may tear at the side and if operative interference is delayed delivery may occur through such a tear. If the os is very resistant it may present at the vulva still undilated. Rupture of the uterus and death from shock, hemorrhage or peritonitis will occur if the stenosis cannot be overcome. In some cases the cervix may become markedly edematous due to interference with the blood supply and after a time it may slough off. Hemorrhage from this complication may be serious and even fatal. Sepsis is a real danger partly because of the bruised edematous tissue and also because interference is usually necessary in these cases.

The chief danger to the child is asphyxia. This is especially marked when the membranes rupture prematurely because, in that event, the hydrostatic cushion of the bag of water has been lost. If operative interference is instituted, we have the added danger of forceps injuries. Provided there are no complications present, the prognosis is uniformly good if the patient is seen early in labor and the proper measures are taken to safeguard both mother and child. If the first stage is unduly prolonged or if ill advised operative procedures are attempted, the outlook is not good.

In the treatment of cicatricial stenosis of the cervix we should bear in mind that although intelligent expectancy may be followed by spontaneous dilatation, yet many babies have been lost and mothers exhausted by fruitless attempts to overcome the obstruction. It is true that there is little danger to the child during the first stage of labor if the membranes are unruptured but in the prolonged first stage of dystocia of cervical origin we must keep careful track of the condition of the child and be ready to interfere at any time in its interest.

Should interference be necessary we have our choice of manual or instrumental dilatation, multiple incision, vaginal hysterotomy and abdominal Caesarian section, either the classical operation or the Porro modification. The procedure will depend upon the condition of the case. Manual dilatation is often very difficult, due to the scar tissue in the cervix. Instru-

mental dilatation is a questionable procedure in any case because of the difficulty in gauging the amount of force used. Multiple incisions of the cervix are of great value in those cases where the internal os is completely dilated and the external os is undilated. In such a case incisions from $1\frac{1}{2}$ to 2 cm. in length will cut only the supravaginal portion of the cervix and not endanger the bladder or the rectum. The anterior and posterior incisions will be practically bloodless but the lateral ones will give rise to hemorrhage in some cases. This can be controlled by pressure of the advancing part until the child is born after which sutures are applied, or the incisions may be made between clamps which are removed after several minutes. If this is done there is rarely very much hemorrhage. Mason (14) speaks highly of this method and reports several successful cases.

Vaginal hysterotomy may be used if the child is not too large. It is especially valuable where the cervix is not completely taken up. However, it is very hard to do when the cervix is far back and cannot be pulled down. Caesarian section has been used when conditions contraindicate vaginal delivery. If the classical operation is done it is essential to see that the cervix is open sufficiently to ensure proper drainage of the lochia. LePage (15) has reported a case in which the Porro Caesarian was performed in order to obviate this difficulty. It may also be done in order to prevent the possibility of future pregnancies, or in case the uterus has been infected by attempts at delivery from below.

The following cases have been selected from the Gynecologic and Obstetric records in order to illustrate some of the above points.

Case 1. Mrs. G., a Greek housewife of 26, (Obstetrics No. 1328) was examined at the fifth month of her first pregnancy. Her history and examination were entirely negative. The cervix was long and the external os small. When eight and a half months advanced her membranes ruptured prematurely and pains began three hours later. Examination showed the fetus to be in occiput left anterior and the child in good condition. Under the influence of moderate pains the cervix dilated to the size of a quarter in about six hours. After this she began to have a constant bloody discharge but examination revealed no other sign of placenta praevia or premature separation. After twelve hours of hard pains the cervix was found on rectal examination to be thick and swollen and about one-half dilated. The patient was anesthetized and mid forceps applied. The cervix was pushed back over the advancing head and the child extracted. It was in pallid asphyxia and was resuscitated with some

difficulty. The anterior lip of the cervix sloughed off subsequently but the mother otherwise made an uneventful recovery. The etiology of this case of dystocia probably was premature rupture of the membranes resulting in cervical spasm. There may also have been an endocervitis with adhesions between the cervix and membranes. The long continued pressure of the head upon the undilated os resulted in interference with the circulation and edema.

Case 2. Mrs. B., (Obstetrics No. 1465) entered the Hospital in labor, October 13, 1916. She had four children living and well and there had been numerous miscarriages. Seven years previously she was operated on for laceration of the cervix. Five years ago she had a miscarriage early in pregnancy. At the time of entrance she had been having very hard pains for ten hours and because the doctor could find no evidence of cervical dilatation he brought her to the Hospital. Vaginal examination revealed the cervix to be obliterated and very thin. The external os was about the size of a dime. After this the cervix dilated rapidly and within two hours the child was born without interference. The rigid cervix in this case was due to a previous trachelorrhaphy. Its rapid dilatation was the result of the giving way of the old scar tissue because examination at the tenth day revealed a bilateral laceration which was quite deep on the left side.

Case 3. Mrs. E. W. Housewife. Married. Was operated in June, 1911, for cystocele and rectocele. The Watkins interposition operation was performed, the cervix being repaired and the perineum built up. She was not sterilized. Three years later she entered the Hospital pregnant, about at term. She had been having severe hemorrhages for three weeks. Examination revealed the presence of a complete placenta praevia with the cervix pushed far back in the hollow of the sacrum. It was so far back that even with a normally implanted placenta the uterine contraction would have been unable to dilate it. Realizing the impossibility of a vaginal delivery an abdominal Caesarian was done and the uterus removed with the product of conception. This case also teaches us that whenever the interposition operation is done in the child bearing age the patient should be sterilized.

Case 4. Mrs. L., aged 35 (Obstetrics No. 1700), entered the Hospital during the sixth month of her pregnancy. She has four children living and well, the youngest being ten years of age. She was operated in 1912 for lacerations of the cervix, at which time an amputation was done. She has always had menstrual difficulty but following her operation this has prolonged. Severe cramp-like pains begin before the period and last until the flow has ceased. The present pregnancy began in June, 1917. In the latter part of October she began to notice a protrusion from the vulva, which increased in size until it was as large as an orange. This interfered with walking and became markedly irritated. She could not urinate until she replaced the mass. Examination showed the presence of a six months pregnancy complicated by prolapse. The bladder came down outside of the vulva and the vagina was completely inverted so that the fornices were only a centimeter inside of the vulva. The

cervix could not be found at first but careful inspection revealed a tiny os which just admitted the finest probe. It was identified by a small amount of stringy mucus which was present. It had been amputated and the stump covered by vaginal mucous membrane thus accounting for the difficulty in locating it. The prolapse could easily be replaced but recurred as soon as she stood on her feet. It could not be held in place by a pessary because of the extensive perineal laceration. She went into labor a week before the expected date of confinement, her pains beginning at six p. m. of March 17th. At first they were ten to fifteen minutes apart but by midnight they were coming at four minute intervals, lasting about forty seconds. She was put upon her feet and the cervix pushed outside of the vulva. It was found that there had been no attempt at dilatation. When the prolapse was replaced, if she remained in bed, there was no tendency toward recurrence even during a pain. She continued in labor throughout the night, the pains becoming harder but no more frequent. At ten a. m. she was examined by Dr. Peterson who found that there had been no change in the cervix. Inasmuch as sixteen hours of reasonably hard pains had produced no effect upon the cervix, it was decided to interfere. The patient was anesthetized, and a probe inserted into the cervical canal. It was just large enough to admit a uterine sound. This was followed by a small hemostat and dilated until the metal dilator could be introduced. This was replaced by the thumb and forefinger as soon as possible. Dilatation was continued normally until the thumb and three fingers could be introduced. At this time it was found that the internal os also was incompletely dilated. Manual dilatation was unusually difficult owing to the scar tissue so the bladder was dissected up off the uterus and the anterior lip was split in the midline for a distance of about ten centimeters. The child was then delivered by version and extraction. It was a female weighing six pounds two ounces and was only slightly asphyxiated. The placenta was then expressed and the incision repaired. The patient has made an uneventful recovery, her highest temperature being 101.6 degrees on the third day.

The choice of interference in this case is worthy of explanation. In the first place, the question of the abdominal route presented itself. This was rejected for the following reasons: 1. The cervix and vagina had been prolapsed outside of the vulva for six months and undoubtedly were badly contaminated by pathogenic organisms. 2. The external os could be found only with the greatest difficulty by direct inspection. Had an abdominal Caesarian been done it would have been necessary in order to secure drainage to dilate the cervix, which would have been even more difficult to find from above. This difficulty could have been obviated by the Porro Caesarian but this would interfere with subsequent operative procedure to cure the prolapse. 3. The adhesions following Caesarian, the possibility of which could

not be removed, would seriously interfere with a subsequent attempt to cure the prolapse by the interposition operation. For these reasons, then, the vaginal route was chosen.

Manual dilatation was first attempted but was rejected after trial because of the scar tissue about the os. Multiple incisions were rejected because the internal os was likewise not completely dilated and according to Dührsen their use is not applicable in such a case because of the proximity of the bladder and rectum. Consequently vaginal hysterotomy was performed. There is only one disadvantage which can be found with the operation in this case. There will undoubtedly be scar tissue along the attachment of the bladder to the uterus. Whether this will interfere with the interposition operation remains for the future to decide. This patient will return for the correcting of her prolapse sometime after the process of involution is complete.

There is one other point which deserves mention in connection with the last case and that is the occurrence of procedentia complicating pregnancy. In these cases there is a great tendency to abortion but if pregnancy continues the prolapse usually retracts itself spontaneously. The development of the condition during pregnancy, however, such as occurred in this case, is very rare and the fact is noteworthy that she spent most of her time after the fourth month with a mass the size of a large orange outside of the vulva without interfering with the pregnancy.

The treatment of cystocele during labor is also brought up in this condition. If the patient lies down there will be no interference with the bladder during the first stage. It should be emptied frequently and we must caution her against bearing down. As the head descends after dilatation of the cervix the cystocele may be tucked back out of the way.

REFERENCES.

1. Galabin and Blacker. *The Practice of Midwifery*, 1910.
2. De Lee. *Text Book of Obstetrics*.
3. King, E. H. The Rigid Os as a Complication of Labor, *Journal of the American Medical Association*, 1893, XXI, 418.
4. Grace, J. W. Intrauterine Injection of Glycerine in Cases of Rigid Os Uteri, *Nashville Journal of Medicine and Surgery*, 1893, LXXIII, 159.
5. Smith, T. C. Hypertrophic Elongation of the Cervix Uteri Obstructing Labor, *American Journal of Obstetrics*, 1897, XXXVI.
6. Lusk, W. T. Labor at Term, Undilatable Condition of the Cervix Due to Cicatricial Tissue, *New York Medical Journal*, 1889, Vol. 1, 281-283.
7. Fullerton, A. M. *Woman's Medical Journal*, Toledo, 1893, I, 195.
8. Mitchell, E. W. Rigidity of the Os Uteri, *American Journal of Obstetrics*, 1893, XXVII, 407-413.
9. Leonard, V. N. Postoperative Results of Trachelorrhaphy in Comparison with those of Amputation of the

Cervix, *Surgery, Gynecology and Obstetrics*, January, 1914.

10. Doleris. Quoted by Leonard.
11. Audebert. Quoted by Leonard.
12. Johnson. *Journal of the American Medical Association*, 1884, II.
13. McPherson, R. A. A Case of Dystocia Following an Operation for Laceration of the Cervix Uteri, *Bulletin of the Lying-in Hospital, New York*, 1905.
14. Mason, N. R. The Treatment of Abnormal Rigidity of the Cervix by Deep Incisions, A Report of Two Cases, *Boston Medical and Surgical Journal*, June 1908, CLVII, 571-575.
15. LePage. Un cas de dystocie par rigidité cicatricielle du col. Operation de Porro. *Bulletin Medicien, Paris*, 1903, XVII, 947-949.

ADDITIONAL REFERENCES.

- Pfeiffer. Atresia of the Cervix. *American Journal of Obstetrics*, 1916, LXXIII.
- Warren. *The Management of Rigid Os in Labor*, New York Medical Journal, 1904.
- Garland, H. R. Chloral as an Antispasmodic on the Rigid Os Uteri in Parturition, *Massachusetts Medical Journal*, 1903, XXIII, 433-442.
- Davis, E. P. *Medical News*, Philadelphia, 1892, 656.
- Waxham, F. E. Occlusion of the Os Uteri as an Impediment to Labor with a Report of Two Cases. *American Journal of Obstetrics*, 1883, XIX, 982-984.

DISCUSSION.

DR. CYREMUS G. DARLING: There are one or two points in this paper which might be discussed, and one is the question in regard to the formation of cicatricial tissue following cervical repair or amputation. I suspect that the statistics that have been gathered in this paper belong to a past age in gynecology, as no one doing operations of this type nowadays, would expect his operation to be followed by marked cicatricial tissue, hence these reports as to the cause of dystocia would hardly stand with present methods of operating. The methods which may be pursued to overcome these various contractions are properly mentioned and most of them can be followed by most any one who practices obstetrics even in a general way. Occasionally there will be a case such as the last one described which will require a more difficult and careful operation. Fortunately these conditions are rarely found, at least, I take it to be so. I never encountered one in five or six hundred confinements.

There is one point which might be raised, and that is in regard to amputation or repair of the cervix causing sterility, or rather, causing miscarriage. I think that is hardly true if the operation is carefully performed; in fact, it is very frequently performed to overcome this very condition, and if sterility occurs it would be because of the imperfect operation, or perhaps infection following such.

DR. HENDERSON: Trachelorrhaphy especially is an operation done for the cure of sterility. Occasionally a very marked bilateral laceration of the cervix may be the cause of repeated abortion. The repair will probably result in the carrying of future pregnancies to full term. Amputation of the cervix, however, would never be done for this purpose. The operation of amputation of the cervix is not always properly done and many of these cases become infected and in these cases there is always excess of scar tissue. These cases will occasionally be met with by the obstetrician.

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

A. L. Seeley, ChairmanMayville
E. W. TolesLansing
R. S. BucklandBaraga

Editor and Business Manager
FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
On Leave of Absence on Duty
Medical Reserve Corps, U. S. A.
GERRIT J. WARNSHUIS, M.D.
Acting Representative Publication Committee.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Gerrit J. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

August

Editorials

ADIEU.

With this issue we are bidding our members and readers adieu. The war activities of the past year and its inherent effect upon the profession of Michigan caused the officials of our Society to impress upon us that our duty was at home, and that the responsibility of certain work rested upon us. Acting upon that advice we endeavored to acquit ourself of that duty. The degree in which we succeeded is left to our members to determine. We at all times purposed to meet the exigencies that arose and strove to respond to the uttermost to promptly and efficiently complete each problem. We do not purpose to enumerate them in detail; he who is not conversant with their nature can scarcely realize their portent and relation to our profession. The Society has met and fulfilled every demand that was made upon it. We also believe that our organizational affairs are in such condition as will cause all future requirements to be met in like manner. Our house may be said to be well in order.

The work accomplished, the fundamental

principles of war activity outlined, business policies determined and the demand existing for more medical officers for our military forces we felt that the restraint that had been placed upon us could now be severed. For the fourth time we requested the Council for "Leave of absence." It was granted on the 16th of June. We applied for a commission, which was conferred and in due course orders were received to report for duty on July 18th, 1918. We are writing this on the eve of our departure.

In bidding adieu we desire to address just a word to you who are intrusted with the duty and responsibility of "Keeping the Home Fires Burning." This is *your* Society and *your* Journal. Upon *you* rests the work of maintaining its efficiency and influence to the fullest degree and to direct the work that properly comes within its province. Our Society is and must remain the head and fountain of medical life and activity in Michigan. You individually and our members collectively must recognize that fact and be governed accordingly. There must not be and never should be tolerated individual, factional or unaffiliated semi-official movements in this state in medical matters. No single group or coterie of individuals, even though alleged to be acting under governmental policy, should be recognized in our war work. All such administrative bodies or "Councils" should and by right ought to emanate from official appointment by our State Medical Society. We must not countenance the stepping in of politicians and schemers who would usurp our vested rights and powers. Our Society must be and remain the head of all medical activity in the state and from it all other subservient movements or work should emanate. There never was and never should be a single reason for independent movements or activities. Governmental officials, those in real authority, have repeatedly stated that it is their belief and experience that co-operative assistance to our military forces can best be rendered through the channels of organized effort--the National, State and County Societies. If error has been made in creating such bodies let that error be now corrected, but let us draw into closer

relationship and become more firmly united. We plead for organizational compactness, unity and efficiency. We deplore all attempts toward the opposite or the existence of spasmodic efforts of independent groups. If you hold membership in or are affiliated with any such outside movement Council, or Committee we urge that you at once resign and subscribe your allegiance and work to your own Society which is undertaking and will meet all necessary war demands. You can serve but one master, recognize but one head—*your* State Medical Society. Be loyal to it at all times.

Your County Society and its officers must receive your support. The thinned ranks must not be permitted to waver. By accepting double duty you must keep its purpose and work maintained. Your meetings must not be postponed or abandoned. The few remaining should attend each meeting religiously and regularly and even though the number present may be small do not recognize discouragement. The boys who have gone are with you in spirit and you should feel their presence and carry on the work until they return. Do not let them return home to find that you failed to keep their local Society intact or that you permitted it to become disorganized. We plead that you remain true to the trust that has been imposed in you. Now, if ever, be more than loyal to your local society.

We believe that the administration of the State office of Secretary and the editing of the *Journal* will be continued in an efficient and satisfactory manner under the arrangements that have been made. At times occasion for tolerance may arise and those conducting the work will merit kindly consideration. Errors made will be cheerfully and promptly corrected when attention is drawn to them. Please remember that new problems constantly arise as the result of changing commercial conditions and that it is not always easy to arrive at a prompt or satisfactory solution. For illustration: We are now compelled to rearrange our mailing lists and method of mailing to comply with new Postal Zone Regulations. We must also submit and certify to intricate reports on percentages and rates of advertising,

reading matter, "fillers," etc., of each issue and indicate the number of copies going into each zone before *The Journal* will be accepted in the post office and distributed by the U. S. mail. This must be done for each issue. Similar problems arise each month on varied subjects. Therefore we solicit your patience while these requirements are being met and bespeak your cooperation.

Finally as a last adieu. Even though we feel and clearly see our duty, compliance is not an easy proposition. To relinquish the professional, industrial, civic and social relationships that have resulted from sixteen years of strenuous effort and to turn our bark upon a new course and out upon a new and unknown sea realistically brings upon us an avalanche of conflicting emotions. We meditate upon the past and speculate as to the future. We have sought to do our duty and to acquit ourselves of the trust that was imposed. We extend our sincerest thanks for your confidences and express a hearty appreciation for the honors bestowed. The memory of our official relationship will ever be cherished. As we depart, ready to devote our all to help "Carry On" till this war is won our last word to you, member and reader, is: We wish you health, success and contentment. We bid you adieu till we meet again.

ANNOUNCEMENT.

The Medical Profession, of Michigan, has as a whole responded loyally to the call of our country, and its full quota of physicians for army service has been filled by volunteers. A further call has been made however, and doubtless these will continue to come during the period of the war.

While we are expected to fully supply the needs of our Army and Navy for medical men, we are also instructed by the Government that the home service of medical men, domestic and industrial, must be fully provided for. This will require a system of careful selection and assignment for service of physicians in the State of Michigan, if we are to do intelligently

and consistently our full part in "winning the war."

To this end all agencies heretofore engaged in securing physicians for service will be consolidated. Committees of each County Society will have in hand the collection of data and the selection of physicians for Army and Navy service as well as for home service.

This will provide for a fair and equitable distribution of service as between communities in counties, and should equalization as between counties become necessary, means will be provided therefore.

A War Committee consisting of Drs. F. C. Warnshuis, C. G. Jennings and J. G. Turner was appointed by President Biddle and this committee has performed considerable preliminary work. Dr. F. C. Warnshuis, Chairman of the Committee, is now called to the army medical service, and I have appointed to take his place on the committee, Dr. Reuben Peterson, Ex-President and well known to practically every physician in Michigan.

In behalf of the Michigan State Medical Society, and in order that the good name of the medical profession of Michigan may be maintained, I am asking that not only every county medical society, but that every loyal physician (and I can not believe there are any other in Michigan) give to our War Committee their most loyal support and helpful co-operation in carrying along intelligent and effective effort.

Let us show that the Doctors of Michigan are all red blooded Americans with no yellow streaks.

ARTHUR M. HUME, President.

To the Members of the Society and Readers of the Journal:

The administration of affairs of the Secretary's office and the editorship of *The Journal*, heretofore so admirably and successfully conducted by Dr. Frederick C. Warnshuis, has terminated. Our Secretary-Editor requested that the Council grant him indefinite leave of absence and this has been done. Dr. Warnshuis has responded to the call of his country and the call of his heart and has entered the Medical Service of the Army.

The Chairman of the Council, Chairman of the Publication Committee, Treasurer and President met with the Secretary-Editor in Grand Rapids, July 5. It was there arranged that, working in co-operation with the experienced office force remaining, the affairs of the Journal and of the Secretary's office will be carried forward by these officers of our State Society.

We appreciate our lack of experience in these lines of work but we are loyal and devoted to the interests of our State Society and our Country. We invite your suggestions, even your criticisms. We ask your patience and forbearance with our shortcomings, but most of all we ask your assistance and co-operation in making the work of the medical profession of Michigan a large factor in that great cause that now most appeals to the heart and the head of every loyal American—THE WINNING OF THE WAR.

ARTHUR M. HUME, President.

Editorial Comments

We understand that the Ford Hospital in Detroit was closed July 1st and will pass into the Governmental service and be re-opened on August 1st under the direction of the Surgeon-General. At present writing we are uninformed as to what class of patients it will be utilized for by that office.

We once more appeal to our readers to patronize our advertisers. Please realize that now more than ever the *Journal* is made possible by reason of our advertising receipts. Unless these advertisers receive suitable returns upon their investment they are going to withdraw their patronage. Your support is imperative to maintain this income for your *Journal*.

Years hence in reviewing the response that Michigan's profession made to the call for assistance by the Surgeon-General we will have every reason to be proud of the record that will be revealed. However, to maintain our position

at the front of state activities of sister states it becomes imperative that certain communities now review their record and if it is found that they have not responded in the degree that they should immediate steps should be taken to rectify their record. The need of the service demands that more men must be forthcoming now from certain parts of the state.

In so far as is possible and regulations permit your editor will endeavor to contribute to these editorial pages. We hope to be able to send copy for each issue but are not fully informed as to the degree of freedom that will be permitted in commenting on or describing military medical practices and experiences. With these comments we are concluding temporarily sixty-eight "batches" of editorial comment. The writing of that amount of copy has been the most difficult part of our editorial duties. We have always sought to make these comments to the point and to deal only with pertinent and timely matters of interest to our members. We trust that the effort expended has been of interest to our readers.

Excellent reports are being made of the use of a two per cent solution of formalin in glycerine in infected wounds and suppurating cavities. We would appreciate a report of cases with detailed results from the use of this formula. Try it and let us have your personal experience.

The Editor's text-book "The Principles of Nursing Technic" published by W. B. Saunders Co. has been adopted by the Navy Medical Department as the standard for its training station's courses of instruction. We believe our members will pardon this personal announcement in this column.

We are wondering how long it will be before that group of "Professional organizers" referred to by President Bevan of the A.M.A., will attempt the organization of a Medical Officers' Veteran Association. It occurs that possibly they can already find a sufficiently large group of charter members.

Seriously if such an organization becomes desirable at the close of the war it should be affiliated with or be a section of the American Medical Association, with state units.

Yes it was a small issue—the July number. The combination of A.M.A. meeting, revision of mailing list to comply with new postal regulations, State Board meetings and scarcity of news items and County Society news all contributed to making the issue a small one. Incidentally it cost less and so enables us to retrieve on total expenses because the two previous issues were expensive editions.

Please continue to send us your news items. Also your Society news and meeting reports. Your members on duty receive *The Journal* and are eager to learn of organizational activities and "doings" at home. Please Mr. Secretary send these reports and items.

The Editor, Dr. F. C. Warnshuis, is assigned to the Surgical Division of a Base Unit, for early Overseas Service. He reported for duty at Camp Sherman, Chillicothe, Ohio.

The response by the profession of Michigan is splendid. Please read carefully and thoughtfully President Hume's editorial in this issue. We again urge that all our members at home become active in their Society work at home and assume in every detail the responsibility that rests upon them.

Lt. Col. V. C. Vaughan—"Our Vaughan"—who has been on duty in the Surgeon General's office in Washington since war was eagerly greeted by many of our members during the Chicago meeting of the A.M.A. Col. Vaughan has indeed proved himself a sincere friend to many of our members who have entered the service. His advice and assistance in the work at Washington has been invaluable and he has endeared himself in the hearts of many. The profession of Michigan is proud of his service.

Dr. A. P. Biddle has been elected President of the Detroit Board of Education. The election is a pleasing one, more so because it insures the future of the Detroit College of Medicine and Surgery which is now under the management of this Board. We extend congratulations.

Just a hint to those entering the service about the purchasing of uniforms and outfit. Considerable money will be saved if you make a

trip to Camp Custer and purchase your equipment from the Quartermaster and at the Depot Brigade exchange. Splendid uniforms can be secured for \$35.00. Blankets, shirts, bedroll, locker, hats and caps can be purchased with 15 to 40 per cent. saving over what you pay a tailor or civilian stores. It is worth the trip. Another suggestion is to not to purchase only what is necessary for your reporting outfit. Buy the balance when you get in camp where you will have time to learn what you will need and according to your own particular tastes and wishes.

War Committees of County Societies will please read President Hume's editorial. Remember we are working under orders from Washington transmitted through the War Committee of the A. M. A. As orders and instructions are received they will be transmitted to you and in the meantime endeavor to have the men in your community who are eligible for a commission and can be spared file their application with the Surgeon-General.

"The Laboratory That Knows How."

The Cutter Laboratory of Berkeley, Calif., has for twenty years been serving the physicians of the country; but in order to better meet the requirements of the profession, they have re-organized and enlarged their Chicago office, and are better prepared than ever before to serve the interests of our readers. Accordingly this Journal has accepted their page announcement and is printing that announcement in this issue. If you find their service available for your practice, we bespeak for the Cutter Laboratory a share of your patronage.

We are informed that our State Board of Health is becoming crippled in its work by the exigencies of War. Some of its laboratory men, several local health officers and many physicians of the state heretofore doing or supporting the public health work, have gone into War service.

The physicians of Michigan have always been and we believe always will be the leaders and in fact the main support of all public health work. While the state has provided for the official direction of its public health service, the actual conservation of the public health has been carried along by the medical profession.

In its time of need our State Board of Health is appealing to the medical profession to assume individual responsibility in this conservation work during the period of the war, and its appeals must be heeded not only collectively but individually. Not a new but a greater responsibility has come to

each one of us, and just to the extent that we assume a discharge that responsibility will be loyal to our countries service.

It is quite probable that some form of organized work will laid out along these lines. At this time we are simply sounding "first call" so that every loyal physician in the state may be polishing up his equipment ready to take his place in the line of duty as a volunteer in the army for the conservation of man power.

Deaths

Lieut. Wm. L. Miller, M. R. C., U. S. Army, Saginaw, Michigan, graduate of the University of Oregon, 1915, registered pharmacist fellow of American Medical Association, was killed in France, May 28, 1918.

Dr. Miller was in the service of his country with Ambulance Company No. 128, Sanitary Train No. 107, Thirty-Second Division, American E. F. in France.

He was but a youth of 28 years when death covered him with glory and made his name one that will live in the profession of Michigan for all time to come. His was the rare honor that can come to none other of being first in the medical profession of Michigan to make the supreme sacrifice.

We can express our feelings in no better way than to cite the stanzas of the now immortal McCrae, who died as Miller died in the service of the flag.

Oh guns, fall silent 'till the dead men hear
Above their heads the legions pressing
on.

(These fought their fight in time of bitter
fear

And died not knowing how the day had
gone.)

Oh flashing muzzles, pause, and let them
see

The coming dawn that speaks the day
afar;

Then let your mighty chorus witness, be
To them, and Caesar that we still make
war.

Tell them, oh guns, that we have heard
their call,

That we have sworn, and will not turn
aside,

That we will onward 'till we win or fall,
That we will keep the faith for which
they died.

Dr. Earl Bigham for twenty-five years a practicing physician in Grand Rapids died on July 5, after a brief illness following diabetes.

State News Notes

Clinical Congress of the American College of Surgeons. In announcing the plans for this year's meeting to be held in New York the week of October 21st, the invitation is first extended to Fellows of the College, so that if you are interested to attend I would urge you to send in your registration at once, as following the plan of previous sessions, attention will be limited to a number that can be readily accommodated at the clinics without overcrowding. After thirty days, if the limit of attendance has not been reached by advance registration on the part of Fellows, invitations will be extended to a selected list of men whose names have been approved by the State Credential Committees.

A war session is planned—with distinguished officers of the English, French and Italian Armies, together with American medical officers, participating in the evening programs to discuss the important phases of surgery in the field and in evacuation and reconstruction hospitals. Acceptances of places on the program have been received from some of the best known European surgeons.

A strong committee of New York and Brooklyn clinicians, under the leadership of Dr. J. Bentley Squier, Chairman of the General Committee, and Dr. George D. Stewart, Chairman of the Executive Committee, are preparing a program of clinics and demonstrations in leading hospitals and medical schools that will provide a complete showing of the city's clinical activities in all departments of surgery and in allied branches of medicine. Into these plans the surgeons of New York and Brooklyn have entered enthusiastically, expecting to furnish a week of clinical demonstrations surpassing in scientific value and interest any previous effort.

In closing let me remind you again of the necessity of sending in your registration at once to insure receiving a membership card, for when the limit of attendance has been reached no further registrations will be accepted.

Of the twenty graduates of the Detroit College of Medicine and Surgery this June, sixteen will enter the army or navy.

This is the fiftieth class to graduate from the institution and the last that will receive diplomas from the old board of trustees.

The college passes under control of the Detroit

board of Education July 1. A dean will be secured from out of town and he will name the new faculty.

Sixty-five members of the graduation class of the University Medical School have received internships. The large percentage entering hospital work is in accordance with the request of the Government that medical graduates fit themselves for army service by taking a year's internship.

By enrolling in the University Medical school immediately after June 15 and applying for commission in the medical reserve corps, pre-medical students will establish their status as medical students and will be excused from active service during their course of study.

Dr. Margaret Cobb, who has formerly done research work at the University of Michigan, is one of two women psychologists to be appointed to the army medical department.

The British medical mission consisting of Sir. Jas. McKenzie, Col. Sir Wm. Arbuthnot Lane, and Col. Sir Albert Alexander Borace was entertained in Detroit June 21.

Dr. J. L. Burkhart, ex-Secretary of the State Board of Health is now located in Big Rapids. Dr. Burkhart is occupying Dr. Dodger's office and continuing his practice.

Dr. Ricker of Cadillac, was ordered to report for duty on July 14, at Camp Gordon, Atlanta, Georgia.

Dr. Guy L. Connor, of Detroit, is spending his vacation at the "Soo."

The State Board of Registration in Medicine held a special two day session at Charlevoix, July 20-21st.

Barium Sulphate-Brady for Roentgen-Ray Work.—A brand complying with the N. N. R. standards for barium sulphate for Roentgen-ray work. Geo. W. Brady & Co., Chicago. (*Jour. A.M.A.*, June 1, 1918, p. 1599).

Acid. Phenylcinch.—*Morgenstern.*—A brand of phenylcinchoninic acid, U. S. P. It is sold as Tablets Acid. Phenylcinch.—*Morgenstern* containing 0.5 gm. acid. phenylcinch., and as Sodium Phenylcinch.—*Water*—*Morgenstern*, a solution of sodium phenylcinchoninate containing sodium bicarbonate and sugar and representing the equivalent of - gm. acid. phenylcinch.—*Morgenstern* per fluid-ounce.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

INGHAM COUNTY

A regular meeting of the Ingham County Medical Society was held at the home of Dr. and Mrs. C. V. Russell, Lansing, on May 10th.

Together with routine business communications from the State Secretary were read to the meeting of the war needs and dearth of medical officers. There was discussion but no action.

It was enacted to pass suitable resolutions of congratulation to Mayor Roy Vandercook for services in the State Constabulary. The President appointed Drs. E. I. Carr, F. N. Turner, and F. M. Huntley to draft these resolutions.

Dr. William K. West, Copper Range Mine & Railroad Surgeon of the Upper Peninsula, was the guest and speaker of the evening. He read a valued paper on "Fractures and their Management" and interspersed it with instances from his large and long experience. In discussing fractures of the lower extremities, he brought to attention, quite in detail, the use of the Hodgkin splint. He pointed out the principles of Traction and Suspension which are incorporated in the Hodgkin idea.

A social time followed.

A regular meeting of the Ingham County Medical Society was held at the Chamber of Commerce, Lansing, on May 28th.

It was announced that the Patriotic Committee, composed of Drs. W. E. McNamara, L. C. Towne, A. M. Campbell, Karl Brucker, and B. M. Davey, should act as the War Committee, and that this Committee had been announced to the State Secretary.

Doctor Henry J. Vandenberg of Grand Rapids, gave an address on the Cancer program, illustrated with lantern slides and pathological specimens. He took up plant cancer in introduction and called attention to evolution, analogies, etc. of the present status of conceptions. His discussion of Metastasis varying with different types was valuable.

E. I. CARR, Secretary.

Book Reviews

DISEASES OF THE MALE URETHRA. By Irvin S. Koll, M.D., Professor of Genito-Urinary Diseases, Post-Graduate Medical School and Hospital, Chicago. Octavo of 151 pages, with 123 illustrations, several in colors. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$3.00 net. W. B. Saunders Company, Philadelphia and London.

Although more and more interest is continuing

to be awakened in venereal diseases, the need for such a monograph as this will be felt much more in the period of reconstruction than at present. The education that every soldier gets on the prevalence of gonorrhea and the necessity for immediate and skillful treatment will inevitably result in a wide-spread demand upon the profession for the latest and best methods. The exposition of the subject by Koll should, therefore be met with great enthusiasm by the general profession.

The first three chapters are largely introductory. Recent advances in the bacteriology of gonorrhea are given full discussion. The value of the microscopic, complement fixation test, and vaccine therapy is taken up in detail.

The next four chapters deal with acute and chronic gonorrhea and its complications. The pathology is clearly illustrated by many beautiful colored plates. Operations of external urethrotomy, drainage of prostrate, etc., are very explicitly described and illustrated.

There are four chapters on non-gonorrheal diseases of the urethra.

The conciseness and simplicity of the text and the purely personal viewpoint of the writer make the book very pleasant reading.

Miscellany

Anti-Pneumococcic Serum, Type I, Cutter.—Marketed in vials containing 50 Cc. Cutter Laboratory, Berkeley, Calif.

Antipneumococcic Serum, Type I, P. D. & Co.—Marketed in a piston syringe containing 50 Cc. Parke, Davis & Co., Detroit, Mich.

Antipneumococcic Serum, Type I, Squibb.—Marketed in vials containing 50 Cc. E. R. Squibb & Sons, New York.

Mead Johnson & Co.: Mead's Dextri-Maltose, No. 2; Mead's Dextri-Maltose, No. 3.

Procaine-Recoor.—A brand of procaine complying with the N. N. R. standards. Procaine is the substance which was first introduced as "novocaine." The Rector Chemical Co., Inc., New York.

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVII

GRAND RAPIDS, MICHIGAN, SEPTEMBER, 1918

No. 9

Original Articles

REMARKS ON THE ACUTE ABDOMEN.*

F. GREGORY CONNELL, M.D., F.A.C.S.,
OSHKOSH, WISCONSIN.

My explanation for bringing to your attention a subject so time worn as "The Acute Abdomen," is that, I propose to consider part of this very large subject in a manner rather different from that in which it is usually discussed.

To come definitely to the point, by the "Acute Abdomen" is meant an abdominal emergency usually indicated by symptoms such as sudden severe abdominal pain, at first local, and later general, with tenderness, rigidity, nausea, vomiting, constipation, or diarrhea, fever, rapid pulse and leucocytosis, one or more.

I propose to classify these cases as follows: First: those that may be remedied by abdominal operation; Second: those that may not be remedied by abdominal operation.

In the first, the symptoms call for exploratory laparotomy which is automatically followed by the proper diagnosis and in turn rational therapeutics. In such cases the problem is absurdly simple and the fate of the patient rests, not so much with the operator who repairs the damage as with the physician who first sees the case. The repair of repairable damage of the abdominal viscera (granting the presence of surgical judgment on the part of the operator) is comparatively simple; on the other hand the cure of peritonitis, the result of such damage is difficult and the difference is due to the time allowed to elapse between the onset of the symptoms and the making of the abdominal incision. This class of cases, comprising the great majority of abdominal emergencies, I shall not discuss.

Class two demands attention, serious consideration and emphasis, because these conditions may be confused with class one, with

a resultant, ineffectual, if not detrimental, line treatment.

Time will allow but brief consideration of a few of these various conditions; but even a mere enumeration of them will, I am sure, be a surprise to many and will explain the fact that the subject of "The Acute Abdomen," is neither a simple nor a settled question.

CLASSIFICATION OF CASE TYPES.

Cases of "Acute Abdomen" may be subdivided as follows:

1. May be remedied by laparotomy: (Not to be discussed at this time.)
2. May not be remedied by laparotomy:
 - A. Extra peritoneal:
 - (a.) Thoracic—1. Pulmonary.
2. Pleural.
3. Cardiac.
 - (b.) Retro-peritoneal: 1. Renal—Stone.
Dietel's Crisis.
Infarct.
Uremia.
2. Supra-renal.
3. Vertebral, Sacro-iliac.
4. Sub-peritoneal infection.
5. Lymph glands; tbc., Typhoid.
 - (c) Nervous—1. Neuritis, Herpes Zoster, Neuralgia.
2. Myositis, Myalgia.
3. Lead Colic.
4. Tabes.
5. Hysteria, Neurasthenia.
 - B. Intra peritoneal:
 1. Cardiospasm.
 2. Acute Dilatation of stomach or duodenum.
 3. Acute Gastritis—Acute Enteritis.
 4. "Ptomaine" Poisoning.
 5. Typhoid Fever.
 6. Angio-Neurotic Oedema.
 7. Enteroptosis—Gastroptosis.
 8. Colitis.
 9. Intestinal Stasis.

*This paper was prepared for the Surgical Section of the 1918 convention of the State Medical Society.

10. Salpingitis.
11. Dysmenorrhea.
12. Pregnancy.

THORACIA CONDITIONS WITH ABDOMINAL SYMPTOMS.

Pneumonia of the right lower lobe can, especially in children, by irritating the tenth, eleventh and twelfth intercostal nerves, produce pain, rigidity and tenderness in the right side of the abdomen and may closely simulate Acute appendicitis. The disease may be ushered in with a sudden markedly high temperature; vomiting, abdominal pain, tenderness, right side rigidity, leucocytosis, and prostration may all be present. The abdominal tenderness is less characteristic and usually situated high, the resistance is less marked; but may be the same as in appendicitis. On the other hand severe inflammation of the appendix may cause diminution of the respiratory excursion and in the breath sounds of the right lower lobe, in this way tending to make the diagnosis still more difficult. The important point is to *think* of the possibility of pneumonia giving rise to the symptoms in question: notably in children with rapid respiration, dilatation of the al-nasi and high temperature. This will call for a careful chest examination, not confined to its anterior aspect, and in most cases, settle the diagnosis. The X-ray may be of great value.

DIAPHRAGMATIC PLEURISY.

Capps, has found that the visceral pleura is not sensitive to pressure or scratching of a wire, that such irritation of the parietal pleura produced pain; but that irritation of the outer margin of the diaphragmatic pleura, supplied by the lower six intercostal nerves, was followed by reflex pain in the hypocondrium and often in the abdominal wall as far down as the naval or even the groin; and when its central portion was irritated the pain was referred by the phrenic and the third and fourth cervical nerves, to the neck.

The following 23 mistaken diagnoses were made in a series of 61 cases of diaphragmatic pleurisy: 9 appendicitis, 6 cholecystitis, 2 perforation of ulcer of the stomach, 2 liver abscesses, 1 peritonitis, 1 renal calculous, 1 infectious lumbago and 1 brachial neuritis.

The skin and muscles of the abdomen are more sensitive to pain in referred pleural pain than with visceral disease. This is best elicited by pinching or scratching of the skin.

The referred pain in the neck and abdomen are usually induced, or aggravated, by cough

and deep respiration. Nausea and vomiting are more constant in visceral abdominal inflammation, but may occur and be very pronounced in diaphragmatic pleurisy.

Hiccough is not a common symptom in diaphragmatic pleurisy contrary to the current belief.

CARDIAC.

In Angina Pectoris the pain is due to exertion, not food; the blood pressure is usually high; and the heart rarely normal, the attack is accompanied by great fear or apprehension of approaching death. The pain is usually referred to the left arm, but may be referred to the back, epigastrium, testes, leg or right arm. The facial expression is characteristic, the face is sunken, pale, and cold, with an expression of agony, anxiety and distress, quite similar, on superficial examination, to the "*Facies Hippocratica*."

Emphasis ought to be laid on the resemblance of some of these cases to surgical accidents. The sudden onset with pain over the lower sternal and epigastric region, nausea, vomiting, tympany, feeble pulse, ashy color, cold sweat and other signs of collapse make one think of such conditions as gall-bladder disease, acute hemorrhagic pancreatitis, perforation of gastric or duodenal ulcer, hemorrhage into the adrenal capsule, etc. Obrastzow, calls particular attention to this resemblance to surgical accidents which Herrick corroborates.

PERICARDITIS.

In acute pericarditis the symptoms are those of an acute infection, the disease is characterized by pain in the region of the heart, this pain may be referred to the abdomen to the region of the stomach, gall-bladder, or appendix. Fussell has seen pericarditis mistaken for appendicitis; but states that the mistake rarely occurs in the reverse way. Confusion with gall-bladder trouble is more common.

RENAL STONE.

The symptomatology of renal lithiasis has been very exhaustively studied by Braasch, who found great variations in the usually accepted signs and symptoms: for example: typical pain and tenderness in kidney region was present in only 117 of 251 cases.

In 26 pain, general abdominal,

In 30 pain, referred to gall bladder,

In 32 pain, referred to lower abdomen,

In 56 pain, referred to both sides of abdomen,

In 40 pain, referred to affected sides of abdomen,

In 16 pain, referred to non-affected sides of abdomen.

From the above, one is justified in concluding that the pain of renal lithiasis may be very typical.

Braasch, likewise found that hematuria was present in 141 of 251 cases or 56 per cent., a rather indefinite percentage; and to make matters worse, in 500 consecutive routine examinations in cases without symptoms of renal trouble, 146 showed microscopic blood in urine. Cabot, in 150 cases of renal and ureteral stone found the urine persistently normal in 14 per cent.: and hematuria absent in 32 per cent. The present of microscopic blood in urine may be due to pathology in ureter, prostate, bladder or kidney. The mere fact that there is an acute abdominal inflammation may cause microscopic haematuria.

Therefore too much stress must not be placed upon the presence of a few red blood cells in the urine, as indicative of renal colic. The X-ray failed to reveal urinary calculi in 10-15 per cent. of Cabot's cases and 11 per cent. of Brasch's cases.

Confusion between abdominal conditions and kidney stone is not uncommon, for instance, the late Maurice Richardson wrote an extensive article, the last before his death, on "The Error of Overlooking Ureteral Stone Under a Diagnosis of Appendicitis." and Hugh Cabot in 1915 reported 157 cases of stone in kidney and ureter, in 26 of which unnecessary abdominal operations had been performed as follows: Appendectomy 10; Exploratory Laparotomy 7; Fixation of kidney 4; Operation for gall stones 1; Decapsulation of kidney 1; Salpingo-oopherectomy 1; Supra-pubic cystostomy 1; Adhesions 1.

In a recent contribution, Brasch states the 143, or practically one-third of total number, in his series of nephrolithiasis had had previous laparotomies performed elsewhere for relief of pain: 83 had stone in right kidney; 55 stone in left kidney; 5 bilateral.

21 with stone in *left* kidney had previous operations on the right side for appendicitis or gall bladder disease.

Acute Hematogenous Infection of Kidney,
Acute Septic Infarct of Kidney.

Brewer analyzed 13 cases and found: 11 in women and 11 on right side, chill at onset in 4; sudden high temperature at first examination in 12; in 3 cases marked remissions in

others constantly high; in all cases pulse high. In 12 the chief complaint was *abdominal* pain; in 4 right iliac. Costovertebral angle tender in all, muscular rigidity frequent, leucocytosis frequent and microscopic blood in urine of all, but one.

In Brewer's 13 cases, an abdominal incision under mistaken diagnosis was made three times. In Cobb's 8 cases the same mistake was made in 3 instances.

That this type of case is not as uncommon as was previously supposed is shown by the fact that Mason, in 1912 collected 28 cases and Cunningham, in the same year reported 8 additional cases.

A resume of a personal case in which 2 days after an unsatisfactory abdominal operation nephrectomy was followed by a satisfactory outcome is here appended.

SUPRA RENAL CAPSULE.

Addison's disease, or Syndrome, is characterized by: (a) physical and mental inertia, (b) pigmentation, (c) gastro-intestinal symptoms.

Under the last; anorexia, nausea, vomiting, constipation and later diarrhea, enteroptosis, pain in lumbar and iliac regions, which may be severe, with rigidity and tenderness on palpation in right iliac fossa may at times be attributed to intra-abdominal disease.

One meets this syndrome frequently in cases that come under observation with a diagnosis of chronic appendicitis, but one hesitates to diagnose Addison's disease.

That there may be *acute* pain in this class of cases is beyond question, and Tice, cites a case in point. The diagnosis of Addison's Syndrome "and appendicitis" was made. In a "subsequent note" it is stated that there was exacerbation of the appendicitis which led to transfer to the surgical service and laparotomy was performed in which the findings were negative, except for "an old adherent appendix" which was removed. Death occurred the following day and an autopsy was not permitted. This "exacerbation of the appendicitis" was evidently a misinterpretation of the symptoms, being instead, a terminal stage of the Addison's disease.

Brodnitz calls attention to the "violent intestinal colic occurring in attacks, failure of the peristalsis, and isolated intestinal distention." And Ebstein says that "In the terminal stages there is excessive vomiting, abdominal pain and constipation, the abdomen is retracted and the walls tense, the pulse becomes small

and there exists in total, the picture of peritonitis."

Hemorrhage or suppuration may lead to sudden destruction of the supra renal glands. This condition is but rarely recognized, was first described by Virchow, and is characterized by very severe symptoms together with peritonitis which ends rapidly in death.

Sub-peritoneal or Retro peritoneal Cellulitis or Infection calls for careful differentiation from intra peritoneal infection, as they are not in the range of operative treatment, are not remedied by appendectomy or by opening and draining the peritoneal cavity, as such operating does not attack the field of infection: namely the subperitoneal cellular tissue, and such cases often continue to death by general bacteraemia, pneumonia or nephritis.

Enlarged mesenteric lymph glands, usually tubercular, as in "Tabes Mesenterica"; or abdominal Hodgkins' disease, in the right iliac fossa, because the lower end of the root of the mesentery is located on the right side, when discovered on palpation in conjunction with acute abdominal symptoms and temperature may lead to confusion with an acute appendicitis.

A personal case in point, enlarged lymph glands of mesentery in right iliac fossa, in which a gland was removed for diagnosis which was followed by meningitis and death.

NERVOUS.

In a study of abdominal pain it is of interest and of profit, to make a comparative review of causes of pains within the cranial cavity. Fussell cites seven grand divisions of causes of headaches, with this formidable and confusing array of possible causes for pain in the head one might well pause and consider, before jumping at a conclusion without careful investigation, in cases of pain in the abdomen.

Of these we will be able to consider only a few: Herpes Zoster of the face and upper intercostals is recognized frequently, but of the lower intercostals and the first lumbar, if as frequent it is but rarely recognized.

The location of the pain often leads to a diagnosis of intra abdominal disease, and the hot applications which are frequently applied may cause one to misinterpret the presence of vesicles. Such cases have been operated upon for acute appendicitis.

The occurrence of Zoster of the viscera may no longer be questioned.

MYOSITIS AND MYALGIA.

The fact that localized pain tenderness and rigidity may be due to pathological conditions within the substance of the abdominal wall seems to have been consistently overlooked. A myositis in certain localizations of the abdominal wall, if unrecognized might readily be confused with intra abdominal lesions.

The headaches that are accompanied by areas of induration, usually at the origin or insertion of muscles in the scalp and neck, might well be studied more carefully, and the occurrence of similar phenomena in the abdominal wall might clear up some of the uncertain cases of abdominal pain.

LEAD COLIC.

The colic of lead poisoning has frequently led to unnecessary laparotomy, because of its very close simulation of intra-abdominal disease.

The symptoms of lead poisoning are anaemia, (stippled red cells), constipation, general abdominal rigidity, and colic, peculiar in being relieved by pressure, pulse slow and of high tension, with the characteristic Burton's Lead Line, and an absence of temperature and leucocytosis.

The true lead line is not *on* the gum, but is *in* the gum, and in its incipency is not a line, but a series of dots (the result of decomposition of lead in the mouth by the H₂S of decomposed particles of food) and will not be removed by cleaning. The line is present, unfortunately, in only half the cases of plumbism and is best seen by the aid of a magnifying lens in a good light, but if discovered, the diagnosis is positive. In securing the history, it is well to remember that plumbism may occur in occupations other than that given as "painter."

TABES.

The gastric crises of Tabes has until lately in the minds of many, and is still in the minds of a majority of physicians, been considered a rare, unusual and late manifestation of cerebro-spinal syphilis.

That many cases of gastric crises have been mistaken for acute abdominal lesions has been more or less imperfectly realized, but Nuzum's article entitled, "Needless Surgical Operations from Failure to Recognize Tabes Dorsalis," is of great value in attracting attention to the frequency of the slipshod or careless methods in arriving at a diagnosis.

Nuzum collected and analyzed the records of 1000 cases of Tabes treated in Cook County

Hospital during the four years 1910-1915, in which 97 needless operations had been performed upon 87 patients.

The surgeons' diagnoses in these cases were as follows.

Gastric ulcer	19
Gall stones or cholecystitis.....	19
Appendicitis	18
Salpingitis	13
Exploratory Laparotomy	9
Renal calculi	7
Postoperative adhesions	7
Tumor of cauda equina	1
Sciatica (Nerve stretching)	1
Meningocele	1
Ectopic gestation	1
Peritonitis	1

Total number of operations....97

The occurrence of real, bona-fide abdominal pathology in conjunction with *Tabes* must not be lost sight of, just because a person has *Tabes* it in no way eliminates the possibility of an acute abdominal emergency, or any other type of an emergency, and it is just such possibilities that make the personal equation of the diagnostician of so much importance.

Cabot says, "What we have learned lately is: (a) That we must suspect the possibility of *Tabes* even when the pupils are normal and must investigate this possibility by spinal puncture: (b) That any sort of gastric abdominal pain or distress may be due to *Tabes*."

NEUROSES.

Hysteria, with its protean manifestations may, of course, be mistaken for intra-abdominal lesions.

"Hyperaesthesia" or *Clavus Hystericus*, so well known, if transferred to the right iliac fossa would many times be operated upon with a diagnosis of appendicitis.

Still there is no reason why the same severe pain may not occur in the abdomen, instead of the head.

Such tender spots do occur in the hysterogenic points, viz: the breast, trunk, spine and upper and lower abdomen, and it is the type of painful spot in the lower abdomen that has been responsible for the ovariectomy furor; and now the appendectomy craze.

Tympanites or phantom tumor may likewise confuse the issue.

Careful history taking and complete examination with the discovery of evidence of vasomotor instability, anaesthetic areas, or superficial tenderness greater than that elicited by deep pressure, with an absence of temperature or leucocytosis will usually prevent error.

Owing to limited time it will be impossible to consider at this time the second sub-division, that is Acute intra peritoneal conditions that may not be remedied by laparotomy.

CONCLUSIONS.

I realize that these remarks have been rather brief and sketchy, that it has been in fact a mere running commentary upon a certain phase of surgery that is becoming more important. Other confusing conditions should have been included; differential points may not have been sufficiently and properly emphasized, but my effort will have been worth while if I have been successful in calling to your attention the fact that these various conditions may simulate intra-abdominal lesions, some of which may have slipped your mind; and that a diagnosis, to be worthy of the name, must be based upon a careful history of the case, complete observation and accurate interpretation of the data so acquired.

As showing the importance of careful history taking, Behlow says, "From a careful history one can make a positive diagnosis of the primary or major conditions in 53 per cent. of the cases."

If the above possibilities are kept in mind and each case given careful study our unsatisfactory results will decrease. This fact has been well recognized for centuries and has been consistently neglected, as has been shown by DaCosta in an article on "Principles of Surgical Diagnosis," in which he quotes Benjamin Franklin—"Want of care does more damage than want of knowledge," and Sir Wm. Cull—"We make more mistakes from not looking than from not knowing."

The coincidence of curable surgical lesions in individuals afflicted with non-surgical and incurable disease must be recognized and the fact anticipated: that the cure of a definite surgical disease in a chronic neurasthenic does not necessarily mean a cure of the neurosis: or in the trite words of Deaver, "The abdomen will be found to be a veritable Pandora's box of troubles, which do not, however, always fly away when the box is opened."

GROUP MEDICINE—THE DEVELOPMENT OF THE PRIVATE PAY CLINIC.*

ALEXANDER W. BLAIN, M.D., F.A.C.S.,

Surgeon to the Jefferson Clinic,
DETROIT, MICHIGAN.

Civil practice does not differ from military practice so far as the end object of the physician is concerned, i. e., to get the patient back to the firing line in the shortest possible space of time. It makes little difference whether the patient is the head of the family, the mother with her numerous responsibilities or the children in school. It makes no difference what the social status of the patient, whether a wealthy banker or his wife, or the day laborer and his family. The result to be attained remains the same.

In Europe, in the past, two classes of patients received efficient treatment; the wealthy and the very poor. The wealthy obtained relief through their ability to secure the services of numerous specialists, although with the consuming of much time, the poor through the free hospital dispensaries and university clinics. The same state of affairs is gradually taking place in this country. The middle class, the back bone of our country, are to-day receiving the poorest grade of medical service, nor are the medical men who attend them being properly compensated. I propose in my address this afternoon to discuss this subject and also to discuss its solution.

It is now conceded by all, I believe, that the practice of medicine is no longer a one-man job as in the past. It has developed to such a breadth and is still advancing at such a rapid pace that no one man can hope to become efficient in all of its branches. This has led to the development of many specialties more or less limited in scope but possessed of a higher type of efficiency.

The clinical and roentgenological laboratories as developed during the past ten years have been of inestimable value to the practitioner as aids in diagnosis and likewise in the treatment of the sick, and thus in increasing the usefulness of the physician to the community.

The time was when it was unethical to talk of finances in connection with the practice of medicine. That time should pass and more thought should be given by physicians in con-

sidering the business side of practice. It should be a more frequent subject of conversation at medical meetings. The time has arrived when a physician to be efficient must have money in such sufficient quantities, first, that he may meet the ever increasing cost of necessities to insure happiness in his private life, and second, that he be able to spend the constantly increasing amount necessary for travel and study, instruments, laboratory equipment, increased office space and proper office assistants to enable him to do efficient work.

The time was when the "good doctor" was the man that was "going day and night." There are still many doctors who are going day and night, but I doubt if the adjective "good" applies to them. There is a limit to the physical ability and endurance of all men, even physicians. Industrial institutions have found that to secure the best results men should work a limited number of hours per day—usually eight to ten—and that as the length of the work day increases their efficiency decreases. Since doctors are but human, what is their efficiency after fourteen or fifteen or eighteen hours of work? It is low and the public is the loser, as is also true of the "good physician" in the long run. The great war in which we are now engaged, with its inestimable sacrifice on the part of so many in the medical profession will, we hope, teach that which is so valuable in all endeavor—system and the conservation of human energy.

The family physician is gradually becoming a thing of the past—this due to no effort on the part of the profession. The patient now is seeking the particular physician for his individual case, disregarding the family doctor. Why? Because he has too often been found lacking. In all too many instances the patient has turned from the medical practitioner to the osteopath, to Christian Science, etc., although as a rule he has consulted the medical practitioner first. As so many diseases are self-limited it is not surprising that all men in practice and all systems of treatment have their enthusiastic supporters.

The physician often fails because he cannot become expert in all the branches of medical science. He makes too many mistakes in diagnosis either through lack of time or through lack of facilities such as the X-ray and clinical laboratories afford, and second because he cannot apply the treatment necessary—no man can develop the mechanical technique necessary to cure all of his patients.

*Chairman's address before the Surgical Section of the Michigan State Medical Society, Battle Creek, May 8, 1918.

If the physician is honest he does not divide fees and this keeps him from referring many patients because he does not see how he can become a clearing house for sick people, sending them first to one specialist and then to another and still keep the wolf away from his own door. Second, the patient may not have the money to pay the high fees of the specialists to whom the physician might want to refer him and again the physician hesitates.

These questions then arise:

(1) Is the medical profession living up to its high reputation in continuing the present system of treating the sick, especially those of the great middle class?

(2) Is the public receiving the full benefit of the present sum total of knowledge of the profession?

(3) Will the extension of the instruction offered to medical students materially improve the service at present given to the public?

My answer to the above questions is most emphatically No. Granting two contentions, first that there is a limit to the working ability of all men, and second, that the practice of medicine in the present sense of the word is too large a field for one man to master, it is obvious that the medical profession has reached the zenith of its power for good as based on its present system. These ideas are not new in the commercial world, nor in the medical world for that matter, but the idea has been very slow of adoption on the part of the profession.

Theoretically the closed hospital with a limited staff is a practical remedy for some of our shortcomings. But since the method of appointment of hospital staffs is largely political, the jealousy engendered has been, heretofore, the stumbling block and, except for the polyclinic departments, there is little co-operation between the various members of the staff of any large hospital.

The present standardization of hospitals by the American College of Surgeons will mark an advance in American medicine second only to the standardization of medical colleges, and will go toward improved hospital service for the public. The American people are gradually becoming hospitalized, but be the hospitals as popular with the public as they may, the great mass of sick people will always be treated outside such institutions. Nor is the hospital a necessity for most diagnosis and treatment, as has been demonstrated by the Mayo clinic—a private clinic, a pay clinic, and

at the same time the most efficient medical organization in the world to-day. The great mass of diagnosis and treatment is done outside of the hospital, it being at best, a hotel for the temporary care of the non-ambulatory sick.

The housing of the clinic staff is best in a separate building. This is, as I have demonstrated before, is more economical and efficient than in offices in the large office buildings. The association of a large group of physicians in an office building does not constitute group medicine and has but few advantages over the home offices of the individual physicians, since the same competition exists with its attendant jealousies and inefficiencies. Such association is purely for reasons of friendship or finances and has nothing to do with a group organized for mutual professional help and growth.

The question then arises, how is such a clinic to be organized? If a town has three men, it is safe to say that each of them is attempting all classes of work, and each in addition, is spending no small amount of time in attempting to distance his competitors. Properly associated, one would be a surgeon, one an internist and one a pathologist and roentgenologist and the patient should have the benefit of the knowledge and skill of all three. As it is now the patient too often consults the three individually, completing the round without a diagnosis—a correct diagnosis which, while not always possible under most favorable conditions is certainly far more probable by the group plan of dealing with a case. To be sure the above principle would not apply to a typical case of measles, but it certainly is true of every chronic case. The clinic in a larger city could further increase its efficiency by still more workers and by further limiting their individual work. In the clinic of which I am a member, the following divisions are made: Surgery, Medicine, Obstetrics, Genito-Urinary diseases, Nervous and Mental diseases, Eye, Ear, Nose and Throat, Orthopedic Surgery, Roentgenology, Clinical Laboratory, Diseases of Children, Dermatology, Anesthesia, and Art as applied to Medicine. To this are added assistants for various departments to relieve the various heads and especially for night work. Much of the routine and burden can be accomplished by graduate nurses and medical students. It is wrong to attempt to work all day and all night. If there is one factor which has tended more than any other to lower the standard of the profession it is the individual

lowering of efficiency from working too many hours. This has not been due to over-avariciousness on the part of the physician, but has often been a necessity for financial reasons, a product of our present system.

The service as often rendered the patient by the busy doctor who asks a few questions and writes a prescription is no more scientific and of no more value to the patient, except accidentally, than treatment by the osteopath, the chiropractor of the Christian Science healer. The practice of medicine is brought into disrepute, not by the profession in toto, but by the individual.

Group medicine will go far towards regaining the confidence of the American people in medicine, towards developing the so badly needed clinical research. Such development of the medical man from an over-worked, inefficient individual to a highly capable and efficient unit, enables him to apply the knowledge he possesses, giving to the public that which they have a right to expect from a learned profession, and yet insure to his private life, some of the joys of the day laborer.

The development of the private pay clinic organized on the same principles as some of the well organized polyclinics of the present time is, I believe, the remedy for the present shortcomings of the medical profession in their relation to the community. Richard Cabot has been preaching this doctrine for years. This will give the public better service at a lower price, with a greater saving of lives as well as time. It will also tend to make better medical men, yet giving them more hours for needed recreation and study and financially compensate them far more adequately than is possible under the present system.

727 Jefferson Ave., East.

REPORT OF A CASE OF LIPODYSTROPHIA PROGRESSIVA, WITH OBSERVATIONS.*

BLANCH N. EPLER,
KALAMAZOO, MICH.

This disease is rare, though it is quite possible that the conditions are more frequent than reported.

Two cases aside from the one presented are reported in the United States, one by Charles Harman, New York, and one by Irving J. Spear, Baltimore, in the Archives of Internal Medicine. Twenty-four cases have been report-

ed, two typical ones only being in males. These cases were summarized by F. Parks Webber in the Quarterly Medical Journal, British. 10-1916-1917, from England and Germany.

A. Simons of Berlin in 1911 applied the term Lipodystrophia Progressiva to this disease which is characterized by progressive emaciation of the face, neck, arms and body, with an increased fat deposit in the gluteal region and lower extremities.

The results are very trying to the patient herself, and if not recognized, to the physician also.

Differentiation must be made from those diseases which cause wasting, such as

1. Tuberculosis, Nephritis, Intestinal.
2. Amyotonia Congenita.
3. Primary Myopathies as Prog. Muscular Dystrophy.
4. Progressive Neuropathic Muscular Atrophy.

The disease begins at about six years, or before twelve.

CASE.

E. G., now seven, one of twins, seen first at two and one-half years in consultation and since then at intervals. Treatment was of no avail. Nothing was found in the literature at that time on the case, and the diagnosis was not made until later, when interested in the fat dystrophies Spear's case drew my attention.

Complaint.—Progressive emaciation of the face and upper part of the body.

Family History.—Mother 28 when the patient was born, living and well. Father 29 when the patient was born, living and well, somewhat nervous. Grandparents, maternal: died of tuberculosis when the mother was two years old, grandfather died of old age. Paternal, grandfather; living and well.

No history of disturbed fat metabolism or conditions bearing on the case.

Personal History.—Child of third labor, one of twins, the first born, weight seven pounds. The second twin was transverse, weighed six pounds, lived at birth, and was resuscitated only after forty minutes hard work. All labors instrumental because of inertia.

All children are well; two older boys of nervous temperament (may be due to early care).

Patient always active and bright and always fought for herself; nursed to ten months, well until at one and one-half she had measles in light form.

Present Illness.—At two and one-half years the mother noted the thinning of the child's face with a drawn expression. No other disturbance noted, and the child was taken to a physician. No improvement from treatment and the neck, arms and body

*Presented at Michigan State Medical meeting, Battle Creek, May, 1918.

gradually became thinner and scapulae prominent; the legs were normal, mother considers them plump now.

Present Status.—The child at two and one-half, when first brought to me, looked like a case of malnutrition, with the appearance of a malnutrition infant. Examination was otherwise negative. Saw the child occasionally, no improvement resulted and there was a continual loss of fat. At six and one-half years the examination showed the following:



Epler's case at 2 years with twins.



Epler's case at 3 years with twins.



Epler's case at 6½ years with twins.

Bright, interesting, wizened faced little girl; head and face prominently large because of the absence of fat; on smiling the lines of the face became prominent, giving the child a cadaverous aspect. Eyes, mouth, teeth, glands and neck with the exception of thinness seemed normal; scapulae and ribs prominent, arms thin, buttocks and legs plump and normal. Skin: color fair; Skin picks up from the muscle and seems normal; Subcutaneous fat absent. Stools in the gross normal.

	Measurements		Twin
	Right	Left	
Biceps	16 c.m.	16	17½ & 17
Forearm	15½	15	17 & 16
Thigh	31	31	
Calf	21½	21½	
Ankles			
Chest	35 (Mammary)		
	56 (Below Mammary)		
Waist	50		
Crest of Ilium	55½		
Anterior superior spine	52		
Buttocks	56		
Heart, lungs, liver and spleen normal on examination.			
Urine,			
Blood, erythrocytes, 4,288,000. Haemoglobin 75%.			
White blood cells 4,800. Color index 80%.			



Epler's case at 6½ years with twins.

Differential Count, Polynuclears, 62%. Transitionals, 2%. Eosinophiles, 2%. Slight Poikilocytosis. Small lymphocytes, 30%. Large lymphocytes 4%. Wasserman, Negative. *Mental Condition.*—Bright. *Neurological.*—Reflexes, Achil's Tendon, Radial, Biceps, Triceps, Babinski,—normal. *Treatment.*—The only indication for medicine seemed to be an iron tonic. *Clinical findings of cases reported in literature.* The disease usually begins between six and twelve years of age. Confined to the first half of life and continues until the fat disappears. Larger number of cases reported in Hebrews. The condition is a bilateral symmetrical one. Gluteal fat may be the first symptom as in the case of a five year old girl, the atrophy beginning at eleven: Atrophy may begin simultaneously with the gluteal fat.

A fair proportion of the cases, follow measles, questionable measles, questionable fever, diphtheria, scarlet fever, pneumonia with local pains, and one case followed eye injury with definite pains.

Outlook for the general condition, good.

Treatment, endocrine and other forms gave no results.



Spear's case, age 5.



Spear's case, age 15.

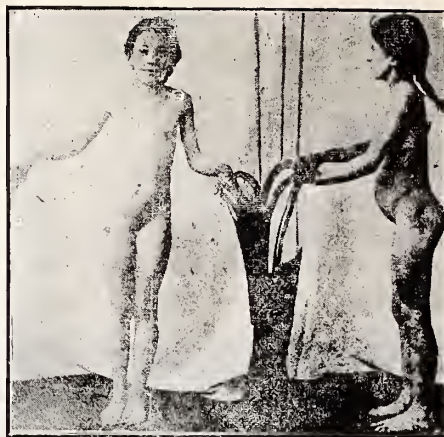


Spear's case, age 15.

TWO RECENT TYPICAL CASES IN MALES.

1st. Now 32 years of age, followed typhoid fever at ten years; showed alimentary glycosuria and excessive accumulation of fat on the buttocks and on the lower extremities.

2nd, Now 29 years of age, showed emaciation at



Boissom's case. Age 10. Hyperthermia of fat on abdomen, buttocks and thighs and hip. Emaciation.



Spear's case, age 10.

six years of age after an accident on the ice which was nearly fatal; showed alimentary glycosuria but no fat hypertrophy.



Simon's Berlin case, 21 years of age. Gluteal fat at 5. Emaciation at 11. Injected human fat in face. Only temporary relief.

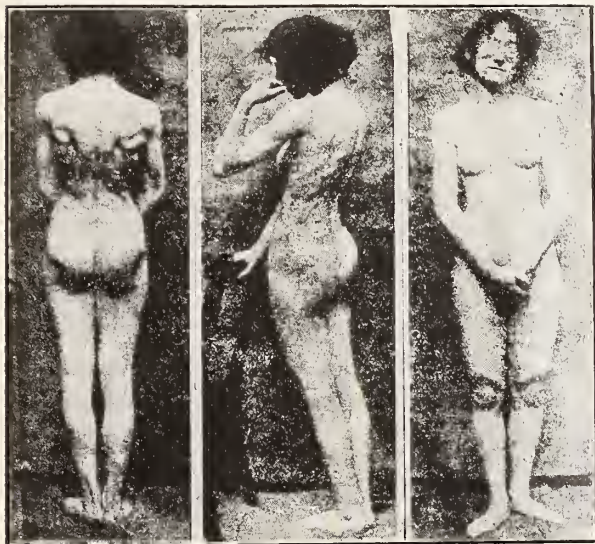
CASES SHOWING SUGGESTIVE RELATIONSHIP.

1. In 1916 Cantley, London, showed a case of incomplete form. A man of 25 with abdomen and lower extremities, excepting the feet, very

fat; typical emaciation began at six, after diphtheria, numbness on the outer side of the leg.

2. *Laignel and Levastine* presented a case of Segmentary Adiposis of the lower limbs in a woman of 39 with enlarged legs which began at 22; the fat hypertrophy extending to thighs and buttocks. Typical thinness of the remainder of the body.

3. *Cases in Males of Bilateral Atrophy.* Bilateral atrophy of the subcutaneous tissue of



Campbell's, London, case. 2. Hebban began at 6 after measles at 6.

the face, thought to be allied with facial hemiatrophy may be a modified form of lipodystrophia progressiva. Some of these cases were associated with skin lesion complications, as lupus erythematosus.

4. *Diffuse Symmetrical Lipomatosis* of the English in which the sides of the face, shoulders, upper arms, back and neck are involved in fat hypertrophy occurring only in males, mostly alcoholics, is a direct opposite picture of lipodystrophia progressiva. (One of these cases improved on thyroid treatment.)

5. *Gilchrist-Johns Hopkins Case* (Johns Hopkins Bulletin, October, 1916) of local fat atrophy of the legs is a most valuable contribution in its pathological findings as to what may take place in lipodystrophia progressiva. The case may prove one of this disease.

6. *Sundvall*, University of Kansas, has just reported a case of localized atrophy of fat cells in the subcutaneous tissue in a patient of 19, this had been previously diagnosed Muscular Atrophy.

After six contagious diseases in her life of 17 years, during which she was "fired all the time," she developed chlorosis and two atrophic areas on the left leg and left thigh.

The left leg and thigh became smaller than the right and showed dilated superficial veins, probably due to a thrombosis from chlorosis.

Microscopical sections showed dense fibrous tissue taking the place of the normal cutis, and absence of fat cells and of nuclear elements with a decrease of capillaries and lymph vessels.

On rubbing the fingers over this area there was felt prominent firm strands of fibrous-like tissue.

The gelatinous like substance in place of the fat suggested a serous atrophy which does occur in wasting diseases.

The complete fat atrophy seemed absolutely independent of any infectious process. This case shows a similarity to Gilchrist's.

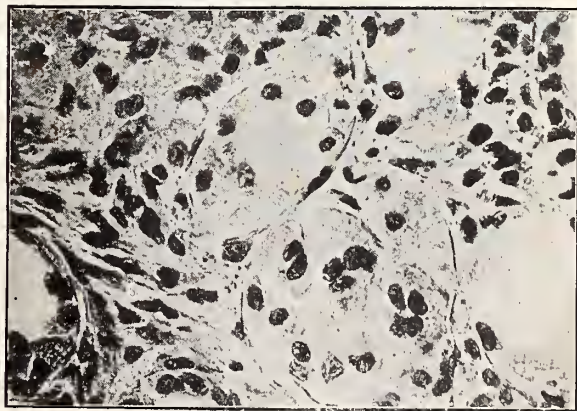
PATHOLOGY OF LIPODYSTROPHIA PROGRESSIVA.

Microscopical sections of the skin show complete absence of fat excepting at the root of the follicles of hair or gland.

Gilchrist shows in his case that local fat atrophy is preceded by the ingestion of the fat by large phagocytic cells, macrophages. This could be the process in typical Lipodystrophia Progressiva. His case was as follows:

Girl of eight, good family, gave a history of toxic erythema attacks with swelling of the joints. Lumps under the skin of the legs appearing externally as dimples.

Bright, with the face of a much older child. The lesions extended from the inguinal region



Gilchrist's case.

A high magnification of the macrophages showing their foam like protoplasm. In the lower right hand corner they are seen surrounding a fat space. Immediately to the left of this area they have completely filled the fat space.

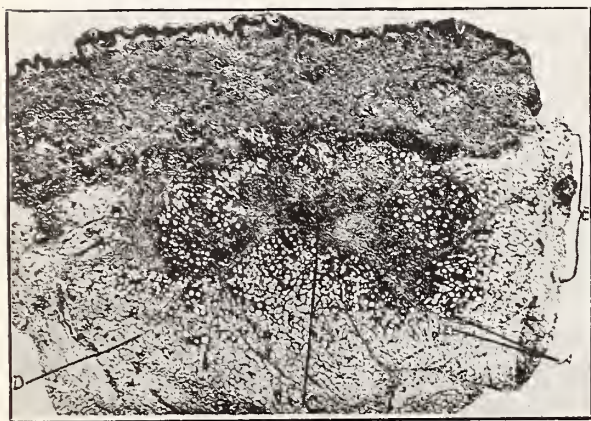
BLOOD.

to the ankle on the inner and posterior aspects.

The smallest lesion of a pea size was of an irregular or round bluish depressed macule, which later formed sunken patches. Sclerotic movable branching strands extended from these patches into areas not atrophied.

White blood cells 15,600. No cholesterin as in Xanthoma.

Microscopical section showed changes only in the fatty layer. In the upper half of the fatty



Gilchrist's case of local fat-atrophy.



Skin: A Lipodystrophia Skin Proof. B. Normal.



Fig. 2. Photograph of a printing of the inner portion of the thigh and leg, by Prof. Max Broedel, Gilchrist's case of local fat-atrophy.

layer was seen a small cellular nodule divided by connective tissue strands and containing near the center plasma cells and at the periphery large endothelioid cells, small round

cells, polynuclear cells, plasma cells and numerous striking cells around and in the remaining fat spaces.

The protoplasm of these cells presented a foam like network, containing from one to three nuclei. Large giant cells were found.

These large cells replaced the fat globules and contained lipoid material but showed no cholesterin as do xanthoma cells. The fat was taken up into the cytoplasm of these large phagocytic cells, and the fat area later became infiltrated with fibrous tissue. This was later absorbed, leaving a soft elastic skin easily picked up from the muscle.

The role of these macrophages seems to be to absorb as a foreign body, the fat which had undergone a chemical change or possibly a bacterial change, through an infective process.

The macrophages, here derived from resting tissue cells and endothelium of the capillaries, belong to the same class as Kupffer cells of the liver, which contain pigment in malaria and the anthracosis cells, of the bronchial lymph glands and the giant cells of tuberculosis.

Six months later the legs of this patient were emaciated, smooth, normal looking legs, with the exception of having no fat. The character of this process, as before suggested, could reasonably account for the process in Lipodystrophia Progressiva.

Gilchrist suggests that some metabolic blood process might cause such a change in the normal fat as to make it partake of the character of a foreign body.

ETIOLOGY.

The cause is unknown. Neither the clinical history nor the pathological findings show definite information on the etiology and it seems feasible to fall back upon the definite advances in the knowledge of diseases characterized by atrophy of muscle or other tissue, or fat hypertrophy or both; as this might be considered a dystrophy of fat.

Such advances in these diseases have been made in the study of carbo-hydrate metabolism and endocrine gland association.

In considering the etiology of lipodystrophia progressiva, it is well to bear in mind the following points:

1. Localization of the process.
2. Metabolic disturbances.
3. Endocrine gland association.
4. Previous infection.

The localization of fat hypertrophy about the gluteal region in this disease and also the lower extremities, is the first sign in some cases of

the disease, and occurs too early to be the fat acquisition of the normal adult female. This condition also presents itself in males in hypophyseal and gonad disturbance, as in eunuchoid conditions.

Localized fat characterizes the diseases of segmentary adiposis of the lower limbs, of diffuse symmetrical lipomatosis as in typical fat neck and of progressive muscular dystrophy in the fat hypertrophy of the legs.

In the study of this case of lipodystrophia as to the possible factors in the etiology, I have been interested in the valuable work on blood sugar and the dysfunction of carbohydrate metabolism, especially when associated with the fat dystrophy and I have been impressed with the possibility of reverse metabolic processes being a factor in fat atrophy.

The chemical findings in the disturbed metabolism in the two diseases upon which much work is being done, amyotonia congenita (Oppenheim) in which muscle tissue has been invaded by neutral fat and in progressive muscular dystrophy are somewhat similar.

In these two diseases the following findings were obtained:

Urine.—Creatinine is decreased or absent, and creatin is present.

Glucose is present, or in amyotonia congenita after feeding glucose.

Blood.—Hypoglycaemia is present.

Blood glucose curve in muscular dystrophy is higher than normal on feeding glucose, while the retention of glucose in the blood is twice as long as in the normal.

Creatinine is diminished.

Cholesterin is diminished.

Stools.—In amyotonia congenita are pale, fatty and the condition is one of acholia.

The conclusions drawn are these:

The lowering or absence of creatinine in the urine means decreased muscle activity in these two diseases. The muscles resynthesizing the creatinin to creatinine.

In general a low creatinine output indicates a lessened tissue oxidation; the creatinin output depending on endogenous katabolism of the body.

The creatin increase or presence in urine means decreased sugar oxidation; and insufficient supply of glucose to muscle and occurs in starvation, under-nourishment or destruction of muscle.

Hypoglycaemia occurs when the glycogen storage in the liver does not meet the normal rate of the passing of glucose from the liver

into the blood, or when the rate of oxidation in the muscle from use or otherwise is greater than the formation from the liver. Formation of glycogen in the liver is under the control of the adrenal gland and possibly the pituitary and thyroid, and when the adrenals are impaired the liver loses its power to store glycogen.

Low Cholesterin in the blood suggests a possibility of adrenal impairment.

Now all of this seems to mean that the ingested carbohydrates is not changed into glycogen in the liver, either because of impaired liver functions or impaired adrenal functions, or that of other endocrine glands.

Adrenalized animals show glucose remaining in the blood and not stored as glycogen but as fat within the liver cells. Cushing finds this not storage in hypopituitarism. It has been established that the thyroid and adrenal glands play a role in carbohydrate metabolism. It has been shown that the hypophysis accelerates carbohydrate metabolism and that large doses of the posterior lobe causes emaciation and muscle weakness.

We know that fifty per cent. of diabetics have early adiposity while the latest evidence shows that diabetes insipidus is controlled by pituitrin.

In some cases of adiposa dolorosa (Dercum's Disease) which is characterized by deposits of lumps of fat over the body there have been found tumors respectively of the pituitary, psammoma carcinoma of the pituitary and pathological thyroid and also dysfunction of the thyroid and hypophysis.

Internal secretions seem therefore to play an important role in nutrition and one gland or a disturbance of balance of several glands may impair normal metabolic processes while definite disturbances of the endocrine glands themselves do follow scarlet fever and other infections. Influenza especially, precedes hyperthyroidism.

In the study of the cases of lipodystrophia progressiva so far as I have been able to ascertain, there occurs no change in the internal organs, blood, urine or skull.

It seems plausible however, in the light of the work and interpretations on fat dystrophy and Gilchrist's case of local fat atrophy, that an infection producing an endocrine gland dysfunction may affect the carbohydrate metabolism and fat storage or use of the fat.

REPORT OF A CASE OF SITUS INVERSUS.

W. O. UPSON, M. D.

BATTLE CREEK, MICHIGAN.

(Associate Roentgenologist, Battle Creek Sanitarium.)

A study of the literature shows a large number of cases of transposed viscera reported from postmortem examinations and a larger number from surgical operations, but only a few have been reported from X-ray examinations. I am convinced that this condition is far more common than is usually supposed, but it is difficult to obtain a fair estimate of its frequency, owing to the fact that roentgenologists have re-

of Obstetrics, December, 1917. Sorge, in 1916, was able to collect only two hundred and four-



"All the angles at the base of the thorax are clear. The heart shadow is normal. The shadow caused by the great vessels is seen more extensively to the left of the spine. The spine is straight. The thoracic cage is regular. The heart shadow is reversed, the apex extending into the right chest, while the right border of the heart is a little to the left of the midline.

Right lung: The right lung root is unusually enlarged and contains numerous fibrocalcereous deposits.

Left lung: The left lung root shadow also contains some fibrocalcereous deposits.

ported so few of their cases.

Dr. J. H. Hartz reported two cases in the Medical Record of December 9, 1916, both complete transposition of the viscera. Dr. L. D. Bottsford reported one case of hydrocephalus with spina bifida, complete situs inversus (Journal of the Michigan State Medical Society, October, 1916). Dr. J. H. Jacobson reported twelve cases of left sided appendicitis with transposition of the viscera in the Journal



The stomach occupies a right sided position. The duodenal bulb is about an inch and a half to the left of the midline. The duodenum extends downward, a little to the left, then to the right, and the duodeno-jejunal junction occupies a position just to the right of the midline. The cecum occupies a left sided position. The hepatic flexure is on the left side. The splenic flexure is on the right side. The descending and iliac colon is on the right side. In fact, the entire viscera is practically normal, with the exception that it occupies a transposed position."

teen cases. According to that author, the first case reported from an X-ray examination was published by Vehemeyer in the *Deutsche Medizinische Wochenschrift* in 1897. Kerr, in ten thousand autopsies, covering a period of ten years, saw only two cases of this condition. Bland Sutton reported one case in three thousand abdominal sections. Gruber, in 1865 made an exhaustive study of the literature and collected seventy-nine cases of complete transposition of the viscera. In his collection, forty-nine cases were men, nineteen were women and there were eleven in which the sex was not mentioned. In seventy-one of the seventy-nine cases, both chest and abdominal organs were displaced. Of the abdominal organs alone, there were eight displacements. Kuchenmeiser, in 1883, increased the number to one hundred and forty-nine. Pic, in 1895, reported one hundred and ninety cases, which number represents all of the cases known to literature up to that year. Arneill, in an elaborate study in 1902 involving communication with the leading internists and anatomists, reported forty additional cases.

In looking over the barium meal examinations made by Case at the Battle Creek Sanitarium, I found the records of one complete and two partially transposed viscera.

The case which I wish to report, R. S., is an American, age 21, nurse. The family history is negative. Has never had any illness except the ordinary diseases of childhood. During the routine examination which is made of all applicants for the class of nurses at the Battle Creek Sanitarium, the fluoroscopic examination was made of the chest and the heart was found to occupy a right sided position, after which a complete examination was made, including the barium meal in which the following condition was noted.

CARDIAC CONDITIONS THAT DO NOT DISQUALIFY FOR ARMY SERVICE.*

COLLINS H. JOHNSTON, B.A., M.D.,
GRAND RAPIDS, MICHIGAN.

Member Medical Advisory Board at Grand Rapids, Michigan,
Member American Climatological and Clinical Association,
Central States Pediatric Society,
Michigan Trudeau Society, Etc.

It is evident to anyone in touch with the examination of recruits that no inconsiderable number of men with impaired hearts are being

passed into our new armies and the experience of foreign countries has shown that many soldiers whose hearts were damaged before the war have broken down under the strain of active service. This entails a great loss to the army and an unnecessary increase in the financial burdens of the country.

Most hearts with an organic lesion present such unmistakable physical signs that a correct diagnosis is not difficult. This is especially true when diastolic murmurs are present and the government has directed that recruits with such murmurs be rejected for all military service. But many impaired hearts present no physical signs whatever and in these cases symptoms become of especial importance. Realizing, however, that it is easy for a shirker to exaggerate his symptoms, some cardio-vascular experts on draft boards and at cantonments, in the absence of physical signs, discount symptoms in great measure or ignore them altogether. A considerable number of recruits complain of symptoms, especially shortness of breath, palpitation and precordial pain, in whom no signs of impairment of the heart are found on physical examination. But a diagnosis of heart disease should not be made from symptoms alone. Hence it is not surprising that in the limited time given to the examination of each recruit a considerable number of impaired hearts should escape detection. It seems, therefore, an opportune time to discuss some of the cardiac problems presented to examining boards and I cheerfully accepted our president's invitation to open a discussion with a brief paper on "Cardiac conditions that do not disqualify for army service."

Diastolic murmurs with practically no exceptions are indicative of organic lesions. Systolic murmurs on the other hand may be functional or organic. Functional murmurs at the apex may disappear on exertion, but exercise often brings out a functional murmur which entirely disappears with a few moments rest in the horizontal position.

SYSTOLIC MURMURS.

Thayer says that apical systolic murmurs which are heard in the recumbent position and disappear when the individual stands up are not of any pathological significance in the absence of other signs of cardiac involvement and that in true mitral disease such murmurs, if modified at all, become a little louder in the erect posture. On the other hand, functional murmurs often disappear when the patient is lying down, while an organic murmur, espe-

*Read in part before the American Climatological and Clinical Association at Boston, June 5th, 1918.

cially that of mitral stenosis, may be audible only in the latter position. Accentuation of the second pulmonic sound is also often more readily recognized in the prone position. It seems evident therefore that every case of suspected valvular disease should be examined in both standing and prone positions for their bearing upon murmurs as well as their effect upon the heart rate, and to avoid overlooking the presystolic murmur and thrill of mitral stenosis the heart should always be examined while the subject is holding his breath at the end of forced expiration.

Aortic stenosis must not be diagnosed from the mere presence of a systolic murmur which may be due to roughening of the aortic cusps or orifices, dilatation of the aorta just above the valve, thickening of the valve from arteriosclerosis, pressure upon the aorta by a mediastinal tumor, or anaemia. Other physical signs of aortic stenosis must be present, such as the characteristic slow pulse, hypertrophy of the left ventricle, systolic thrill and a feeble or absent second sound. You must not forget that the point of maximum intensity of the murmur of aortic stenosis may be in the pulmonary area where it may be mistaken for pulmonary stenosis or patent ductus arteriosus.

When a systolic mitral murmur is typically rough and loud and low pitched, and is transmitted to the axilla and occupies the entire systole, thus replacing the first sound, and when the murmur is accompanied by a thrill and accentuation of the second pulmonic sound, and especially if there is a history of one or more attacks of rheumatic fever or other acute infections, organic valvular disease should be strongly suspected. But incompetence of the mitral valves leads to varying degrees of enlargement of the heart so regularly that without it no systolic murmur at the apex, whatever its character, intensity or propagation, should be considered indicative of mitral regurgitation. Exceptions to this rule are so rare as to be almost negligible. In addition to this the apex beat is usually displaced to the left and its force increased. There is also usually accentuation of the second pulmonic sound. By far the most important of these associated conditions is enlargement in the size of the heart without which a systolic murmur at the apex should be entirely disregarded and must not be considered sufficient ground for rejection for military service.

CARDIAC HYPERTROPHY.

A diagnosis of hypertrophy should not be made merely from a displacement of the apex beat as this may be due to extrinsic causes such as adherent pleura, pleural effusion or pneumothorax. Neither should it be made from an increase in the area of pulsation alone as this may be due to extrinsic causes also. The only pathognomonic sign of hypertrophy of the left ventricle, as far as the apex is concerned, is *increased force of its impulse*, which of course may be hidden by overlying lung in emphysema, a thick chest wall, etc. A large diffuse apex beat with a forcible thrusting heaving impulse and extension of the area of dullness to the nipple line or beyond it are characteristic of dilatation and hypertrophy of the left ventricle. "An apex beat in or just outside the nipple line, with a forcible protusion during systole may be taken as evidence of moderate hypertrophy."¹ In nervous recruits the heart often beats rapidly and with an appearance of increased force, but on palpation it will be found that the beat is light and weak. But slight degrees of cardiac hypertrophy are not always easy to recognize. A recruit whom I recently sent to a cantonment with a diagnosis of functional mitral systolic murmur and in whom a teleoroentgenogram showed the heart to be normal in size was returned with a diagnosis of "mitral regurgitation, moderate degree of cardiac hypertrophy."

X-RAY IN HYPERTROPHY.

Having used the X-ray for several years in the diagnosis of enlargement of the heart and wishing to know what method was preferred by the Cardio-Vascular Division of the Army, I sent a letter of inquiry to the Surgeon General's office and received the following reply:

"If the X-ray is to be used in an attempt to determine accurately the size of the heart, the plan and tables recommended by Professor C. R. Bardeen in the American Journal of Roentgenology for December, 1917, are probably the most accurate and certainly the most elaborate.

"In the judgment of the undersigned, however, there is grave question whether the determination of the heart size by means of the silhouette is as accurate and as satisfactory for military purposes as is the method of careful physical diagnosis alone. In the case of seriously diseased hearts and of suspected aneurism the roentgenological evidence is often of great value, but in the case of hearts likely to be encountered in examining registrants for the draft, that is, hearts that are normal, or nearly normal in size, careful physical examination gives information so reliable and satisfactory that an additional X-Ray examination seems to me, usually,

unnecessarily elaborate and time consuming. The question as to hypertrophy is much better answered by the character of the impulse imparted to the palpating hand than by the size of the X-ray shadow. Slight or moderate hypertrophy without dilatation gives an increase in the volume of the heart so slight as to make it doubtful whether it can be recognized by any method of examination, but such hypertrophy does declare itself in the added force and lifting character of the impulse, even when it is difficult by any method to recognize an increase in size. A roentgenological examination of the heart is by no means free from factors of uncertainty, and while it sometimes furnishes very valuable information it seems to me very doubtful indeed whether in the case of men being examined for the army it gives any more accurate information than can be obtained much more rapidly and simply by skillful and careful physical examination."

There is a group of patients in whom there is unmistakable evidence of enlargement of the heart but no indication of valvular or nephritic trouble, and it is by no means infrequent to find patients with apparently perfectly normal hearts which present the electro-cardiographic deviations supposedly typical of hypertrophy. In the young a certain amount of hypertrophy and dilatation of the heart seems to be physiological and does not seem to impair its efficiency. McKenzie compares this physiological enlargement to the increase in size of the muscles of a blacksmith's arm.

MYOCARDIAL IMPAIRMENT.

But enlargement due to any pathological lesion such as valvular disease is *always* accompanied by a weakened heart muscle. In cases of murmur, therefore, in which the examiner is in doubt as to the existence of hypertrophy, and in the lesser degrees of enlargement where no gross lesions are found, as well as in a considerable number of cases with symptoms but in which no definite signs of organic disease can be discovered on physical examination, the important thing to determine is whether or not there is co-existent change in the cardiac musculature with resultant damage to the reserve power of the heart. Has the recruit any myocardial degeneration? Can he undergo physical exertion without distress? Is he fit for general military duty?

The diagnosis of heart disease is far too often based upon the existence of murmurs. Too much stress is laid upon valvular disease and not enough upon the condition of the myocardium which is the great sufferer in acute rheumatism and other infectious diseases

such as scarlet fever, measles, pneumonia and influenza.

Although it is impairment of the myocardium which gives rise to the well known symptoms of heart disease many such hearts may show no indication of weakness until called upon to do extra work. If a heart is healthy, exercise produces a rise in blood pressure, an increase in the pulse and respiration rate during which their normal ratio is pretty well maintained and a decrease of about one cm. in the transverse diameter of the heart.

After hopping one hundred times upon one foot or hurriedly walking up a couple of flights of stairs the normal rate should be resumed within two minutes, the respiration being the first to return the blood pressure next and the heart rate last. But if cardiac insufficiency is present this return to the individual's normal may take four or five times as long and shortness of breath, precordial pain or distress, vertigo, palpitation, or fluttering sensations in the chest may be complained of. The pulse may become irregular and the rate out of all proportion to the amount of exercise taken and the normal pulse-respiration rate is often considerably disturbed. The blood pressure may fail to rise and occasionally dilatation of the heart is observed. "When the exercise is poorly tolerated the patient appears exhausted, is markedly dyspnoeic, the pulse is very rapid and its return to normal is retarded. The expression of the face is often quite characteristic; the mouth is open, the lines about the face are exaggerated and the general expression is that of anxiety and exhaustion. Marked general tremor described by the patient as shakiness is a prominent feature in many cases. The symptoms complained of are precordial pain, shortness of breath, giddiness and weakness. These symptoms are not equally prominent but vary greatly in individual cases. When the exercises are well tolerated the picture is quite different; the appearance of the patient may be quite normal, the dyspnoea slight or absent, the pulse rate relatively low, with a more rapid return to the pre-exercise rate."²

In this connection I wish to call attention to the fact that Captain S. Calvin Smith of Camp Custer in a study of 35,000 men found that 80 per cent. had pulse rates of 80 or more before exercise. His conclusion was that the average pulse rate of 72 per minute is not the pulse rate to be found in active youths between twenty and thirty years of age and that the radial

rate may be expected to be ten or more beats higher than the classical average of 72.

FUNCTIONAL DISTURBANCES.

While breathlessness, pain and palpitation are the first and most important signs of cardiac insufficiency, when they are present it must not be concluded that the heart muscle is always at fault for many hearts tolerate physical exercise badly at first and some of these symptoms are common to both myocardial weakness and vasomotor instability. Many men who present themselves to draft boards have led sedentary lives and on account of defective development or general nervousness are poorly fitted for nervous and physical strain. Their hearts may be perfectly healthy, but during examination they suffer from palpitation or excited action of the heart, the beat becoming forcible and rapid. Sometimes a systolic murmur may be heard. Exercise may produce excessive fatigue and actual exhaustion, attacks of giddiness or fainting, palpitation and precordial pain. These men show no constant physical signs, but in many of them the heart rate may be abnormally high when up and about and moderate exercise may increase the pulse rate excessively. If told to lie down and breathe deeply and slowly for a few moments, the heart action often becomes less forcible and the rate slower. McKenzie believes that in at least 90 per cent. of these nervous or neurotic subjects the heart itself is not primarily at fault and that the majority of recruits who have heart symptoms do not suffer from heart disease but from physical and nervous exhaustion.

There is also a mental factor in many of these cases which must be taken into account. For instance, I recently examined a recruit twenty-six years of age who came from a Local Board with a diagnosis of tachycardia and with a written diagnosis of "endocarditis with hypertrophy." He had never had any infectious disease. Until three years ago he worked out of doors as a contractor. He then changed his occupation to a sedentary one and began to gain in weight, being 35 pounds overweight when I examined him. A year later he began to be nervous and was troubled with palpitation. He was frequently awakened in the night with precordial pain and would get out of bed and walk the floor a couple of hours. His thyroid was not palpable but he said my examination of his neck caused pain. Before exercise his pulse was 120. There were no murmurs and no evidence of hypertrophy. After hopping 100 times which seemed to give him

a good deal of general distress, his respirations were rapid, his pulse 150 and a slight apical systolic murmur was heard. The murmur soon disappeared but his respiration remained about 120 as long as he was in the examination room. He had been married a year and his wife expected a baby in a couple of weeks. He admitted his financial affairs were not in good condition and that he did not wish to enter the army. I told him I thought the exercise and out of door life would reduce his weight, strengthen his nerve centers and make a new man of him, with which he agreed.

NEURO-CIRCULATORY ASTHENIA.

Thomas Lewis has recently proposed the name "Neuro-Circulatory Asthenia" (N.C.A.) for a group of cases "which present a well defined symptom complex in which certain nervous and circulatory symptoms are associated with an increased susceptibility to fatigue"³ which have heretofore been included under the term "Irritable Heart of Soldiers" or "Disordered Action of the Heart." These recruits show symptoms which it is not possible to ascribe to any one definite diseased condition. After exercise the usual symptoms of heart trouble are manifest such as breathlessness, fatigue, chest pain, palpitation, giddiness, headache, etc. There is frequently a more or less pronounced tremor of the hands which is coarser than that usually seen in exophthalmic goiter. The hands are also often cold and clammy and markedly cyanotic. The subject may be ruddy and vigorous or of poor build, asthenic and debilitated with a tendency to profuse perspiration. The apex beat may be diffuse or forcible and heaving, but without dilatation or hypertrophy. Pulsation of the epigastrium and the peripheral arteries is common. The heart rate is almost always accelerated, being from 90 to 100 beats or more per minute in the upright position. There is often a striking inequality in the pulse rate brought on by a change from a horizontal to an upright position and the rate may be markedly accelerated after slight exercise. After hopping 100 times the pulse does not return to its normal rate at the end of two minutes.

Lewis sums up his description of these cases by saying: "It is strongly recommended, above all, not to transport soldiers suffering from this disorder overseas for active service, as it is known that their period of service on full duty is short."⁴

TACHYCARDIA.

Closely allied to the weak hearts or neurotics or neurasthenics and the hearts of Neuro-Circulatory Asthenia are some of the cases of simple tachycardia and I frequently find them difficult to classify. In some instances they come from the Local Board with a diagnosis of tachycardia and we find the pulse rate normal at the Advisory Board. In other cases the heart is rapid before examination and does not slow down after the lapse of several moments in the recumbent posture. In some cases the tachycardia is the only symptom present and is evidently due to excitement or emotion. In others there may be shortness of breath, after hopping but the respiratory rate is often proportionately less than the pulse rate.

Some have used alcohol and tobacco to excess. Unless the pulse rate is persistently over one hundred and the individual has a definite history of trouble extending over a considerable period and unless definite signs are present on physical examination and providing hyperthyroidism, tuberculosis and other acute infections can be excluded, these cases of simple tachycardia should be accepted for military service and we have passed a good many of them on to the cantonments without their being returned.

HYPERTHYROIDISM.

Without question, however, some of these rapid hearts are due to hyperthyroidism or early tuberculosis. There may be no apparent enlargement of the thyroid gland and but few if any prominent nervous symptoms. Rapid heart and tremor may be the only signs present. It is often however possible to detect a tendency to vasomotor disturbances, a warm moist skin, warm extremities, active capillary circulation and rapid action of the heart, the rate of which is easily increased by any mental excitement. The knee jerks are increased and slight muscular tremors may be appreciable. The individual is easily exhausted both mentally and physically and incapable of sustained effort.

"Graves Disease is above all things a condition of heightened excitability of the vegetative nerves accompanied by disordered metabolism and abnormal action of all organs innervated by them, of the heart, thyroid and adrenals amongst others; but there is no sufficient justification for classifying all cases in terms of thyroid enlargement. The presence of a goitre exhibiting vascular anomalies in association with other evidences of sympathetic irritation and metabolic disturbances leaves no room

for doubt as to the diagnosis, nor does the absence of a goitre where sympathetic and metabolic disturbances are marked. But the presence of a goitre with tachycardia alone, or with tremor alone, is not sufficient ground for the diagnosis of Graves' Disease in the absence of other signs of sympathetic or metabolic disorder."⁵

Cases of simple enlargement of the thyroid with no symptoms of hyperthyroidism should not be rejected; but as we know that sooner or later some of these cases show symptoms, if even a slight degree of tachycardia or tremor are present the individual should be rejected for general military service however small the thyroid may be. If, however, only a rapid heart is present without the characteristic fine tremor of Graves' Disease, in an individual who is in good general condition and whose thyroid is not palpable and Neuro-Circulatory Asthenia, tuberculosis and other acute toxic conditions can be excluded, he can safely be accepted.

ARRHYTHMIA.

There was formerly considerable confusion as to the significance of cardiac irregularities, but we now know that certain irregularities are indicative of serious disease while others are of little or no importance. One of the latter is sinus or respiratory irregularity which has a definite relation to respiration, the pulse rate increasing during inspiration and decreasing during expiration. This form of arrhythmia is of no importance and should never be a cause of rejection for military service.

Extra systoles or premature contractions are one of the most frequent causes of irregularity and are often a cause of worry to the individual and sometimes of perplexity to the examiner. Extra systoles and partial heart block account for the vast majority of cases of intermittent pulse or dropped beats and it is important to differentiate between them as the former are rarely if ever in themselves indicative of an impaired heart, while the latter always mean a diseased myocardium. The diagnosis can usually be made with the stethoscope. In heart block no sounds are heard during the intermission because the ventricle does not contract, but it is exceedingly rare for an extra systole which is not palpable at the wrist to be so feeble as to produce no heart sounds at all. A heart which shows no extra systoles when at rest, but develops them on exertion is probably the seat of myocardial impairment. But an extra systole in a young man unassociated with any other signs of cardiac disease and which disappears

after exercise is not a contraindication to military service.

Practically the only cardiac irregularities which are accompanied by damage to the functional efficiency of the heart are those due to auricular fibrillation and heart block (McKenzie.) There should be no difficulty in differentiating between extra systole and auricular fibrillation in the latter of which the heart is absolutely irregular as to the time and strength of its beats. If present at the recruit's age auricular fibrillation is usually associated with mitral stenosis and a history of rheumatism. Later in life it may accompany myocardial disease. It always produces a marked effect upon the heart's efficiency and may be recognized by the presence of complete irregularity of the pulse and a poor response to the exercise test. The pulse is usually rapid, but if many of the contractions of the ventricle do not reach the wrist the pulse rate may be less than normal. When a heart is irregular and the beat 120 or more per minute it is generally due to auricular fibrillation. Extra systoles disappear when the heart rate reaches 120.

MITRAL STENOSIS.

Although this paper should be confined to cardiac conditions which do not disqualify for army service, I must refer to a condition which is a disqualification in all cases but the correct diagnosis of which is at times a quite difficult matter. I refer to mitral stenosis. A typical case is easily recognized by (1) a short presystolic thrill ending in a sharp, abrupt, loud shock; (2) a presystolic murmur often unusually sharp and abrupt, ending in a short, snappy, sharply accentuated first sound and heard over a quite circumscribed area to the right of the apex beat; (3) accentuation and reduplication of the second pulmonic and often a reduplicated second sound at the apex; (4) a heart normal in size, or apparently smaller than normal, or perhaps more frequently somewhat enlarged to the right, less frequently to the left especially if regurgitation is present. To one examiner there may seem to be a prolongation of the first sound, to another simply a reduplication of the first sound, while to a third the first sound may be so altered as to constitute a systolic murmur. The murmur may not appear until several years after the thrill (McKenzie) and even then may be absent for days at a time. Babcock states that the presystolic murmur of mitral stenosis is one of the two truthful murmurs, the other

being that of aortic insufficiency, but the murmur is not always present to give its testimony when we would like to have it. I have seen Osler hunt four days in succession for a presystolic murmur he wished to demonstrate before finding it. It may be audible only in the prone position or at the end of forced expiration.

In an early case of mitral stenosis which is examined on a day when no thrill or murmur are present, with no enlargement in the transverse diameter of the heart on palpation or percussion, where a possible history of attacks of tachycardia and palpitation, shortness of breath and inability to perform hard work is overlooked, and where the accentuation of the second pulmonic sound, forcible action of the heart and shortness of breath are ascribed to nervousness, it is not surprising that the case is passed on to a cantonment. On the other hand, I frequently find a sharp, apical slap, an accentuated mitral first sound and what seems to be a faint, scarcely perceptible presystolic murmur in a recruit who is apparently more or less nervous and excited in the crowded rooms of the Advisory Board. But when the examination is made some hours later after a period of rest and quiet the heart will appear to be quite normal. Many of these doubtful cases respond in a typical way to the exercise test.

A month ago a recruit came from a Local Board with a diagnosis of tachycardia. I found nothing wrong with his heart and was about to pass him for active military service when he showed me his discharge from a National Cantonment with a diagnosis of "mitral stenosis, severe—mitral regurgitation, moderate." While on a visit to the cantonment a few days later I took the case up with the cardio-vascular expert who said he remembered it well and that the diagnosis had been concurred in by two of his colleagues. The next day I re-examined the man along with two other members of the Medical Advisory Board, with absolutely negative results. His blood pressure before exercise was systolic 104, diastolic 66. After running up one flight of stairs it was 132-65, two minutes later 102-66. Before hopping 100 times his pulse rate was 64, one minute later it was the same. There were no accentuated second sounds, no murmurs, no signs of hypertrophy, an occasional extra systole before exercise, none after.

I have been told that at several of the National Cantonments cases have occurred in which a diagnosis of mitral stenosis has been

made wherein death has occurred from other causes and at autopsy no pathological changes in the heart have been found. This would seem to warrant the conclusion drawn by one of my friends "that other changes can cause a cardiac symptomatology and that the short rolling apical first sound may be just as functional as the systolic blows," which we all know are considered functional in so many cases.

PRESYSTOLIC THRILL.

Morris and Friedlander⁶ have called attention to the fact that a functional presystolic thrill followed by a more or less marked apical systolic shock and associated with reduplication of the first sound at the apex may occur in many perfectly normal hearts while the subject is in the erect position, especially if the heart is beating rapidly. In the recumbent position, on the other hand, particularly if the heart has slowed down, these signs almost if not entirely disappear, but the second pulmonic sound not infrequently becomes accentuated and reduplicated. *No presystolic murmurs*, however, are heard in these cases, there is no enlargement of the heart, the response to exercise is normal and no symptoms are complained of on exertion. These hearts are therefore considered to be normal. In view of these findings and of the fact that the presystolic murmur of mitral stenosis is not always present and that the second pulmonic sound is accentuated in "about half of the cases between the ages of twenty and twenty-nine,"⁷ and may also be reduplicated, and wishing to know what course to follow in doubtful cases, I wrote the Surgeon-General's Office for instructions and received the following from Colonel Frank Billings: "In my opinion the diagnosis should not be made unless there is found on repeated examination a rather typical presystolic murmur and thrill with the characteristic accentuation of the pulmonic second sound. The individual who has mitral stenosis will never respond well to the exercise test.

"Mitral stenosis is simulated by the physical signs of functional disturbance of the heart due to a general unbalanced nervous apparatus often of congenital origin and to toxemia as in thyroid disease.

"To my mind it is better not to disqualify the registrant unless you are quite sure, but let the final decision be made by the medical board of the camp. If the medical board is in touch with the plans of the War Department, doubtful heart cases will be assigned to duty in Development Battalions of the camps for special training and observation."

CONCLUSIONS.

Cardiac conditions to which little or no significance should be attached are:

1. Extra systoles.
2. Sinus irregularities even when quite marked.
3. Irregularities of the pulse at the recruits age when not above 80 or 85 and when myocardial disease and heart block are excluded.
4. Systolic murmurs at apex or base if the heart is not enlarged and the response to exercise is normal.
5. Acceleration of the heart's action if hyperthyroidism, tuberculosis and other acute infections are excluded, if there is no enlargement of the heart and if the response to exercise is normal.
6. Presystolic thrills, accentuated second sounds or reduplication of first or second sounds at apex or base, unless a distinct presystolic murmur is present or the heart is enlarged or the response to exercise is abnormal.

REFERENCES.

1. Principles and Diagnosis of Heart Affections. Sir James McKenzie, p. 132.
2. The Military Surgeon. April, 1918, page 420.
3. The Military Surgeon. April, 1918, page 409.
4. The Military Surgeon. April, 1918. Thomas Lewis, page 424.
5. McCarrison. The Thyroid Gland. Page 225.
6. Morris and Friedlander. Journal of the A. M. A., August 3, 1918, page 375.
7. Cabot. Physical Diagnosis, page 172.

Dependability of Tablets.—There is no doubt about the convenience of tablets, but the accuracy of the dosage content is not always to be depended on. In 1914, Kebler reported the results of a far-reaching investigation of tablet compounding in which he pointed out that tablets on the market were not as uniform or accurate as was generally believed. During the past year, the Connecticut Agricultural Experiment Station undertook the examination of tablets—proprietary and nonproprietary—taken from the stock of dispensing physicians.

The variations found in weights of the tablets were strikingly similar to those reported by Kebler. Allowing a tolerance in composition of 10 per cent., one or more products of the following manufacturers were found deficient: Buffington Pharmacal Company; Daggett and Miller Company; Drug Products Company; the Harvey Company; National Drug Company; B. F. Noyes Company; Progressive Chemical Company; Tailby-Nason Company, and John Wyeth & Brother (*Jour. A.M.A.*, July 27, 1918, p. 300).

TRANSACTIONS

OF THE

Clinical Society of the University of Michigan

Stated Meeting, March 6, 1918

The President, JAMES G. VAN ZWALUWENBURG, M.D., in the Chair
Reported by REUBEN PETERSON, M.D., Secretary

CONSIDERATION OF SOME DENTAL ANOMALIES.

CHALMERS J. LYONS, D.D.Sc.

(From the Dental Clinic, University Hospital, Ann Arbor, Michigan.)

More than a quarter of a century ago it was recognized that during the eruption of the teeth, the brain and the nervous system, the stomach and whole intestinal tract, the circulatory and respiratory systems, all show an increased, though varying liability to irritation.

Years ago that great master in Oral Surgery, Dr. James E. Garretson, taught that the process of the eruption of teeth caused many disorders through reflex disturbances in various directions.

For years unerupted teeth have been recognized as etiologic factors in the production of cysts of the jaws. In spite of all this knowledge little attention has been given to the subject of dental anomalies by writers upon surgical topics. The comparative scarcity of literature along this line has perhaps led to misapprehension regarding diagnosis and treatment and conservative methods, which would result in benefit to the patient have too often given place to uncalled for radical operations, obviously detrimental to the comfort and appearance of the patient.

It is to some of these abnormal conditions that the writer purposes to call your attention at this time.

The human family has, through centuries of use, established what we call a normal condition of the occlusion and arrangements of the dental organs. It has been so established because it is a condition that is most favorable for their function.

Now when a variation from the normal occurs which is a disadvantage or a disturbance of function, we naturally look back to discover, if possible, the cause of the deviation from normality. It has been contended, although not clinically proven, that there is a tendency to degeneration of the jaws of the human race and that the continual development of the nervous system is accomplished at the expense of the osseous system. Thus the more intellectual the human race becomes, through the process of evolution, just in that proportion will the osseous system become depleted.

The disciples of Darwin believe that as we ascend the scale in so-called civilization, we lose some of the factors that were necessary for the maintenance of life in the primitive man. As an illustration—the animal depends upon its physical strength for its food and its protection. The bony framework comparatively is very strong. The bones are large, long and the prominences upon their surfaces for the attachment of muscles are very marked, thus indicating that the muscles are large and strong. As we ascend the scale to man, we find that the bones are comparatively small in diameter, and shorter, showing that the muscles are not so large and strong.

Great changes take place in the jaws and teeth. They become smaller in size, the teeth change their shape, because man is now no longer required to procure his food with his teeth or to protect himself with his jaws. The temporal muscle, zygomatic arch and jaws decrease in size and are not so prominent. Talbot has stated that if we compare the jaws of the orang and chimpanzee with those of the

Esquimaux, we observe a wonderful difference in regard to size, shape and character of the jaws and teeth. If we now compare the jaws of the Esquimaux with those of our working classes, and these latter with the jaws of young people of the well to do classes who are not required to work physically, we shall observe almost as great a change as between the jaws of the chimpanzee and Esquimaux.

Much of our food today is prepared in such a manner that mastication is almost unnecessary and arrest of development of the jaws must follow as a result. While the etiology of all dental anomalies cannot be accounted for by arrested development of the osseous structure of the jaws, many of them originate in this manner. Others are caused by some structural changes in the early development of the teeth and jaws.

We will first consider the impacted lower third molar. This condition is in the large percentage of cases caused by either lack of normal development, or by arrested development of the inferior maxillae. The second molar immediately in front and the coronoid process behind bound the space accorded to the third molar. Each tooth which has no deciduous predecessor is developed beneath the base of the coronoid process, that is, the first, second and third permanent molars. The only manner in which these teeth are able to take their places in the normal arrangement of the teeth in the jaw is by the physiologic absorption of the anterior surface of the coronoid process. While this process of absorption is going on, on the anterior surface, through the laws of compensation, nature has provided for a deposition of bone on the posterior surface. Through these two processes, absorption and deposition of bone, respectively, all of the molar teeth are able to erupt into their proper positions.

However, when either of these physiologic processes in the process of development of the mandible is arrested, the interval between the anterior surface of the coronoid process and the last erupted tooth which is usually the second molar, will be insufficient for the normal arrangement of the presenting third molar. Under these conditions, the tooth in pressing forward, takes a direction in which the least resistance is offered to its progress and a condition becomes manifest which we term impaction.

Another condition which must be recognized in accounting for the malposition caused by

the impaction, is that the tooth has been directed from its course at a comparatively early period of development, irrespective of resistance offered at the time of eruption. This condition may be accounted for by a change in the character of the cancellous bone immediately adjacent to the developing tooth. If, through some inflammatory process peculiar to the individual or by the same process set up through some pathologic disturbance, or trauma, a secondary deposit of dense bone is laid down, around the developing tooth, a change in direction of eruption of the tooth may take place or there may be a prevention of its eruption entirely. This retarded condition is also due to the fact that at the points where all of the other teeth are located, soft spongy bone or alveolar process is found and absorption of tissue takes place more readily at these points than at the point of eruption of the third molars which is made up of dense cortical or true bone. Frequently it will erupt until it comes in contact with the second molar and then stop on account of insufficient space in which case only a small part of the tooth will be presented. The upper third molar presents an entirely different condition on account of the difference in the character of the bones in the upper and lower jaws. When, for any reason, there is a retarded development of the upper jaw which makes it shorter in its anterior posterior diameter, so that there is not sufficient room for the normal eruption of the third molar, the crown of that tooth will point toward the cheek, taking the direction of least resistance in its course. It slides out to the side, being guided by the second molar, which is already in place. If there were plenty of room both upper and lower third molars would erupt without pain which is rarely ever the case.

The cuspid teeth are the next in the series most likely to be impacted. The etiology of this condition is the same as that of the impacted molars—viz. insufficient space for the normal presentation of the tooth in the process of eruption. The cuspid teeth make their appearance long after the eruption of the lateral incisor and sometime after the eruption of the first bicuspid. In case of retarded development of the jaws, there may not be sufficient room between the lateral incisor and first bicuspid tooth for normal eruption of the cuspid tooth and a resultant impaction occurs.

On account of the tendency of an erupting tooth to follow the course of least resistance,

the tooth will slide out to the buccal or into the lingual surfaces of the jaws. It is also true that at an early period of development of these teeth, that a secondary deposit of bone in the jaws, due to an inflammatory process, may influence a change of direction in the developing tooth so as to change its position entirely when it erupts.

While the third molar and cuspid teeth are predisposed to impaction more frequently than any others, yet any tooth in either jaw may become impacted if the environments are not such that normal eruption can be made possible.

The next anomaly which we will consider is the unerupted or aberrant tooth. This condition may be present in any part of the jaws and any tooth may be the offending member.

There is always a reason for the tooth being unable to erupt normally. The developing tooth meets some obstruction in its normal course such as a supernumerary tooth or a normal tooth which has previously erupted and already occupies the space belonging to the erupting tooth. Again, a previous inflammatory condition in the cancellous bone may have set up secondary deposits of dense bone which will prove an obstruction to the developing tooth and deflect it out of normal alignment. This subject would not be complete without a few words relative to the supernumerary tooth.

"Any tooth in excess of the normal number of thirty-two, although clearly cases of reversion of type, in many instances, are included in the category of supernumerary teeth."¹

Albrecht and others maintain that the incisor teeth were originally six in number and thus a supernumerary lateral incisor would be clearly a reversion of type. Their appearance in any situation is evidence that the normal number of tooth buds has been exceeded.

Guilford divides these teeth into two types, those having typical anatomic forms and those having the conical form.

Supernumerary incisors in either jaw having typical forms are not uncommon. In the upper jaw supernumerary centrals and laterals both may appear, the latter more frequently. Supernumerary teeth may occupy any position relative to the dental arch but are more frequently seen on its lingual surface. In addition to molars and incisors supernumerary bicuspid are occasionally found, while supernumerary cuspids are very rare.

PATHOLOGIC CONDITIONS PRODUCED.

We will now consider some of the pathologic conditions which are induced by these dental anomalies. We will take up first the impacted lower third molar.

Perhaps the most common disturbance we encounter is local infections of the soft tissues surrounding the tooth. This condition is usually present in the partially erupted tooth when the gum tissue which should occupy the space between the anterior surface of the coronoid process and the third molar has been forced out over the distoocclusal surface of the tooth and becomes contused in mastication. Bacteria laden saliva and food particles are forced into the interstice between the tooth and swollen tissue and infection takes place. Inflammation is set up and maintained, which is not limited to the injured parts, but more commonly extends to the adjacent structures involving the soft textures about the ascending ramus and frequently involving the paratonsillar region.

Deglutition becomes painful and trismus is set up. Many times the patient is unable to open the jaw more than two or three millimeters. After a time suppuration takes place and the movements of the jaws become less constrained.

In these acute conditions, it has been the writer's experience that immediate procedure is contraindicated. In his opinion the treatment of choice is to apply counter irritants, the application of cold compresses or ice to the face, and have all of the body eliminating processes active.

After the inflammation has subsided and the jaws have become less constrained, conditions should be restored to normal by surgical procedure to obviate repeated attacks. This condition will be rarely found around other impacted teeth than the lower third molar.

A pathologic condition which may occur as a result of any impaction is pressure resorption. When the crown of one of these teeth is lodged or impacted against the root of the adjacent tooth, the hard enamel surface of the impacted tooth will cause a resorption of the tissues of lesser resistance of the other one. This may go on to such an extent that the nerve pulp of the adjacent tooth will be encroached upon.

A very serious condition may arise from an impacted lower third molar by pressure being exerted upon the inferior dental nerve. The position of these teeth in the jaws predisposes

1. Burchard.

to impingement upon the inferior dental canal. In such cases a reflected pain may be set up which will be expressed in any part of the head which has its sensory nerve supply from the fifth or trigiminal nerve.

Neuralgia may have its etiology in such conditions. The late Dr. Henry S. Upson, former professor of neurology in the Western Reserve University, ascribed many of the nervous disorders which "mankind is heir to" to impacted teeth. He states that "certain types of nervous disturbances caused by dental impactions has almost the clearness of a laboratory experiment, as in it the severest symptoms are set up by the simplest irritant. Pain may be from the beginning to the end quite lacking." It is the constant though mild irritation, perhaps not sufficient to produce pain, that sets up some of these nervous disturbances which may of themselves take on a violent form.

Alopecia areata, or baldness occurring in sharply defined patches, leaving the scalp smooth and white, is a condition due to a nervous disturbance. The impacted tooth must be considered an etiologic factor in this affection.

During the last few years, we have had several cases of this nature in the University Hospital that showed marked improvement after the removal of impacted teeth.

Another abnormal condition is quite frequently found associated with the presence of impacted lower third molars is a tendency for these teeth in their effort to erupt to force all of the lower teeth forward. Orthodontists have found it almost impossible to retain normal occlusion following orthodontic treatment with these teeth present in the jaws. Many fine results have been ruined by the presence and activity of impacted teeth.

What are the pathologic possibilities of the unerupted tooth? It is a remarkable fact, and one which has not been fully explained, that unerupted teeth having lain dormant for years in the jaws suddenly become the seat of purulent inflammation with sometimes serious symptoms. Such cases are by no means rare. Some writers are of the opinion that under certain conditions these teeth may act as foreign bodies and may even fall a prey to resorption. Under these conditions where an irritation has been set up and purulent inflammation has become seated, a bone abscess may form around the region of the unerupted tooth. This abscess may develop until a large portion of the jaw becomes involved.

Another condition which is frequently seen in mouths of men and women under thirty years, is the cystic growths connected with teeth whose eruption is retarded. While in the light of our present knowledge the explanation for the formation of these cysts is largely theoretical; Tomes has given the writer the most plausible theory. He states that when the development of the enamel of the tooth is completed, its outer surface becomes perfectly detached from the investing soft tissue and a small quantity of transparent fluid not uncommonly collects in the interval so formed. This fluid ordinarily is discharged when the tooth is erupted, but when from some cause the eruption of the tooth is prevented, it increases in quantity and gradually distends the surrounding tissues, causing a resorption and disintegration of the osseous structures. These cysts may go on developing until a large portion of the jaw is involved.

Again, the unerupted tooth may, by coming in contact with the roots of the normal erupted teeth, cause pressure resorption and thus produce a permanent injury to them. When these teeth lie in close proximity to a nerve trunk, they may cause undue pressure and set up the same obscure nervous disturbances which have been attributed to impacted teeth.

The last of the dental anomalies which we are considering in this paper is the supernumerary teeth. One of the most common resultant consequences of the supernumerary teeth is the obstruction they present to the normal eruption of the permanent teeth. They may retard or entirely prevent the eruption or they may erupt first and force the normal tooth to erupt out of alignment. Warnekros has written quite extensively on these teeth as an etiologic factor in the causation of cleft palate. It is a well recognized fact that in cleft palate there is not a lack of palatine tissue, but a failure of union of the tissue. Warnekros believes that the failure of union is brought about by excessive number of teeth. He says

"As the normal number of teeth during their development requires a comparatively large space, it is explicable that in very many instances, a supernumerary tooth, with the limited conditions of space in the intermaxillary bone which is not yet completely ossified may itself cause a cleft formation in the intermaxillary bone."

In support of this contention which he says he no longer brings forward as an hypothesis, but declares to be a fact, he cites an extensive series of cases as proofs in which he emphatically states that a supernumerary tooth can al-

ways be proved to have been the cause of the cleft.

While we are not yet ready to accept the deductions of Warnekros in their entirety, there seems to be some relation between these anomalies and cleft palate. We frequently find that supernumerary teeth are present in these cases. The writer, however, is not able to follow the reasoning of Warnekros in clefts of the lip alone or in clefts that do not involve the maxillary processes. It has always been a question with the writer as to whether the supernumerary tooth is the etiologic factor in cleft palate, or whether the changes which take place in embryonic life which result in cleft palate do not in some manner affect the development of the normal number of teeth.

DISCUSSION.

DR. CYRENUS G. DARLING: After listening to this very able paper one wonders what can be done to avert this terrible disaster which is coming to the human race. Every once in a while we learn of a new calamity, and still the race goes on. The question arises whether it is worth while to attempt to develop the human jaw back to the chimpanzee shape with all the teeth and strength, or, if this is advisable, whether it can be done. We evidently are departing from this line of development because I can recall very clearly in my early childhood that there was a silver quarter with a hole in it to put a string through, and this coin was kept in the family to tie around the neck of the children while the family was cutting teeth. Another thing in those days was the method of feeding. When the child began to take food, and that was as soon as he could sit up, he was given a crust of bread, or when the parson called and there were many chicken bones, these were saved and given to the babies to use in his mouth as he saw fit, and these agencies no doubt were very largely responsible for the development of the teeth and jaw. We all know in our work on cleft palate and repair of the jaw how very little pressure it takes to mould the shape of the jaw. There is another thought which comes in here and that is the higher the civilization the more of these cases of lack of development will be found. In this lack of development there is pressure upon the nerves which may cause most any nervous disorder and serious disease. When we advance to a stage of civilization we can say that people who have advanced to such a stage where they spell culture with K are especially developed along these lines, resulting in many things with which we are familiar.

DR. JAMES G. VANZWALUWENBURG: Naturally, I am more or less interested in these conditions because I am often a factor in their discovery. I have almost reached the point where I am not surprised to find a tooth almost anywhere. They are the most ubiquitous things we have about the face.

"LYMPHATIC DISEASE IN CHILDREN"

HAROLD DEB. BARSS, M. D.

(From the Surgical Clinic, University Hospital, Ann Arbor, Michigan.)

In examining the records of the Surgical Clinic a short time ago, I learned that recently seven children had been operated upon for suspected appendicitis, and at exploration certain unexpected and strikingly similar features were disclosed. A review of the case histories of these seven children brought to light these common findings.

All the symptoms occurred in children under puberty.

All presented a syndrome suggestive of recurring attacks of appendicitis. Thus—In each, abdominal pain was the most prominent feature, coming in attacks lasting from a few hours to three days. Each complained of nausea. Constipation was the rule. Unlike the usual picture of appendicitis, no case had fever or a leucocytosis. The urine and blood tests were in every case normal. The Wassermann examination of the blood was negative in all cases. A gastrointestinal X-ray in five of the cases gave a picture of ileal hypomotility very typical of chronic appendicitis. And in no case could any pathology be discovered for the appendiceal trouble.

Yet at operation in each and every case the appendix was found free, without any adhesions, and somewhat hypertrophied. It did not look very pathologic. The unusual feature was the presence of enormously enlarged lymph glands in the mesentery and along the spine, retroperitoneal. Those glands draining from the appendix seemed to be especially affected. In each case the appendix was removed, and some of the glands. Again there was unanimity in the reports from the pathologist, for in all he wrote, "Lymphoid Hyperplasia in Appendix and Lymph Gland." Twice he suggested the possibility of a lymphatic constitution.

In trying to correlate this syndrome with other known diseases, that of status lymphaticus seemed most nearly to approach these seven cases. This disease is spoken of as, "A rare condition met with chiefly in children in which the lymph glands and lymphoid tissues throughout the body are in a state of hyperplasia." The lymphatic structures of the alimentary tract are most commonly affected. We believe that in some way our cases are instances of a degree of lymphatic constitution which fortun-

ately are not of an aggravated type and have not resulted in the so-called, "thymic death."

We cannot say positively that the appendix is at fault; but we do know that after removal of the appendix, all the symptoms from which the children had been suffering for two or three years were completely relieved. In two cases a second X-ray after operation showed that the intestinal motility had become normal. What effect appendectomy will have on the general glandular hyperplasia we cannot as yet predict. In favorable cases we would expect atrophic changes in the thymus and lymphoid structures to take place as the child grows older, and the patient may then outgrow all evidence of the disease.

This then seems the rational procedure;—appendectomy to relieve the immediate active manifestations of the disease. This to be followed by ultimate disappearance of the disease through natural retrograde changes.

DISCUSSION.

DR. CYRENUS G. DARLING: This is a very interesting study. How or why were these lymphatics enlarged? And why did the pathologist say that the pathologic condition was struma? When the tonsil becomes infected we think nothing of it if the neighboring lymphatic nodes become enlarged; in fact, we rather expect them to be enlarged and we say that if we remove the tonsils that the nodes will probably return to a normal condition. In the child it is not impossible to suppose that some of this same type of infection may get by the tonsil and be carried along the intestinal tract, evading the destruction which might possibly come to it in all this journey, and safely reach the appendix, there to enter the lymphoid tissue of the appendix and be distributed to the mesenteric lymphatic system from that point. In some of these cases we find quite a wide distribution in the mesentery, wider perhaps than would come from the direct invasion from the lymphoid tissue in the appendix. From the appendix we are told that the lymphatic nodes are found in the mesoappendix and that we might expect the infection from the lymphoid tissue to be carried to these lymphatics and thence to still further lymphatic distribution in the mesentery of the small intestine. It has been our observation in nearly all cases of appendicitis to find that there are two or three enlarged lymphatic nodes over the ileocecal junction, and in some of these cases we are able to trace this enlargement of the lymphatics toward the median line, that is, over into the mesentery and upward toward the median line. Yet, in some of these cases we find a wider distribution than would seem to follow this line unless there was some blocking of the lymphatic tract, and by the damming back of the lymph channels, other lymphatic nodes became involved. It is perhaps more logical to think that there has been an invasion of Peyer's patches or the solitary glands in the intestine from the same infection that invaded the appendix and its lymphoid tissue, and

that this lymphoid tissue had been the point of infection, and that the infection had been carried to the lymphatic nodes. There is one point in this that we don't clearly understand, which may have some bearing upon this point, that is the effect of irritation of the appendix upon the ileocecal valve, whether this does at times produce a spasm of this valve with retention at the lower end of the ileum the same as retained material in the appendix may cause infection of lymphoid tissue there. May it not by spasm of the valve and retention in the lower end of the ileum, cause infection of the lymphoid tissue in this area; or, on the other hand, if there is a patent ileocecal valve which may allow the material to lie still in contact with the lymphoid tissue, may not infection take place in that way? We find that nearly all of these cases occur with constipation, that the material does lie in contact with the lymphoid tissue of the appendix or the lower portion of the ileum long enough to produce irritation and the absorption of some material which causes increase in the size of these glands. If the lymphoid tissue of the appendix should be the point of absorption, we are doing the right thing to remove the appendix and prevent the absorption. If the ileocecal valve is controlled in any way by inflammation or irritation of the appendix, we do the right thing when we remove the appendix. At least, this is a question where we are able to offer some points in favor of this treatment by the results obtained. And I think that we will do well to proceed in all of these cases in this way by the removal of the appendix.

There may be marked inflammations in this locality, and I just recall one which goes still further in this thought of inflammation of Peyer's patches. It was a case of a child having hemorrhage following constipation with tenderness in the region of the appendix. This hemorrhage and tenderness led to the idea of intussusception. The hemorrhage was profuse and not deeming it proper to let this child go without an examination, I opened the abdomen. There was no intussusception, but about three inches up the ileum there were ecchymotic spots along the outer part of the bowel and these extended over on the one side toward the mesentery and the lymphatic nodes were enlarged. I did not proceed any further with this operation. This patient recovered, and after a week or ten days, the temperature went down. Now, you might say I am mixing up a case of typhoid infection, but I don't believe so. It began with constipation and had marked constipation except for the loss of blood. It didn't run the course of typhoid fever. I believe it was some other infection. I think that something might be done by more careful examination of these glands to determine the type of infection, whether it is an intoxication, or an invasion by some form of bacterium. I think that we should carry these studies still further along that line.

DR. JAMES G. VANZWALUWENBURG: All of this makes very interesting speculation, of course, but up to this point we have to confess that most of it is speculation. It only throws into bold relief the dense ignorance under which we labor in regard to the physiology of this portion of the bowel. It is only another phase of the problem of the causes of ileal stasis. I say these are speculations. In

justification of that assertion I want to call your attention to the fact that Dr. Darling at one time argues that the hyperplasia is primary and the intestinal condition may be secondary, and the next moment he assumes that it may be the other way around.

I have been very much interested naturally, because I have been studying the motility of that end of the bowel rather intensively and have reached no conclusions. I want to suggest still another possibility which Dr. Darling omitted. One school of physiologists states that the motility of the bowel is largely controlled by chemical factors, by hormones. It seems to me altogether logical to suppose that the lymphatic hyperplasia may in some way modify the absorption of the food elements in the lumen

of the bowel, or of the specific hormone, and as a result food is retained there until the requisite amount of these substances is supplied. Experimental physiology teaches that when a bowel is full it is much more active than when it is empty, that is, that the contents of the bowel excite it to greater activity. Yet we find almost invariably that in ileal stasis there is a hypomotility, a reduction in the irritability, or the muscular tone is so much higher that there is a tendency for retrograde peristalsis. But these are purely speculations. We most urgently need greater light on this particular segment of the gastrointestinal tract than on any other physiologic subject with which I am familiar.

The importance of differentiating between those who are dangerously color-blind—that is, unable at all times to distinguish between red and green—and those who are only slightly color-blind, is brought out in a recent study conducted by the U. S. Public Health Service and reported in Public Health Bulletin No. 92.

The following classes are regarded as dangerously color-blind and therefore to be excluded from positions in which they would be required to read colored signal lights: (1) those who are able to see but three or less colors in the spectrum, (the normal person sees six or seven); (2) those who see more than three colors in the spectrum, but who have the red end so shortened as to prevent the recognition of a red light at a distance of two miles; and (3) those with a central scotoma (that is, a blind or partially blind area in the field of vision) for red and green.

It was concluded that this class of persons could be distinguished from those harmlessly color-blind by the use of the Edridge-Green color lantern, which was found preferable to colored yarns. The theories on which the color lantern is based are given in detail in the publication.

Another feature of the investigation was the study of the prevalence of color blindness. Excluding those able to distinguish five colors in the spectrum, it was found that color blindness occurs in about 8.6 per cent. of men and 2.2 per cent. of women. Color blindness of a degree dangerous in occupations requiring the recognition of colored signal lights was found to occur in about 3.1 of men and 0.7 per cent. of women. Among refractive conditions of the eye, color blindness occurs least frequently in eyes apparently without demonstrable refractive error; it occurs most frequently in eyes showing mixed astigmatism.

The examinations were made as a part of other studies of the effect of illumination on vision conducted as a part of an illumination survey of the Federal department buildings in Washington, D. C. One thousand persons were tested with the Edridge-Green lantern to determine both the value of the lantern and the effect, if any, of refractive conditions, lesions, and anomalies of the eye, and also of sex, upon different degrees of color perception.

A special study of the Jennings self-recording worsted test was also made, 50 persons being tested

with this and other tests. The results with the Jennings test were found to be too inaccurate for most work, although it was found to be superior to other tests in certain lines of work where great accuracy and the classification of color defects were not essential.

Several "Mixed" Vaccines not Admitted to N. N. R.—The Council on Pharmacy and Chemistry publishes a report announcing the rejection of a number of "mixed" vaccines. In publishing its report the Council explains its attitude toward this class of products: In view of the rapid development of bacterial therapy, the possibility for harm that attends the use of bacterial vaccines and the skepticism among experienced clinicians as to the value of vaccines representing a combination of organisms, the Council has felt that it should scrutinize the claims for such agents with exceptional care and admit to New and Nonofficial Remedies only those vaccine mixtures for which there is acceptable evidence to indicate that the particular mixture is rational. Experienced clinicians have generally come to the conclusion that mixed vaccines have no specific action and that any effect they may produce is due to a non-specific protein reaction. The preparations rejected in the accompanying reports are only a few of the many that are being sold by some biological houses. The report explains in detail the considerations which led to the rejection of the following preparations, all of which were considered because of inquiry received: 1. The Abbott Laboratories: M. Catarrhalis-Combined-Bacterin, B. Coli-Combined-Bacterin, Pertussis-Combined-Bacterin, Streptococcus-Rheumaticus-Combined-Bacterin and Streptococcus-Viridans-Combined-Bacterin. 2. Eli Lilly and Company: Catarrhal Vaccine Combined and Influenza Vaccine Combined. 3. H. K. Mulford Company: Influenza Serobacterin Mixed. 4. G. H. Sherman: Sherman's Mixed Vaccine No. 40 (*Jour. A. M. A.*, June 22, 1918, p. 1967).

Doan's Kidney Pills.—A testimonial for Doan's Kidney Pills by Mr. Ford appeared in the Kankakee Daily Republican, nearly three months after he was dead and buried. The advertisement containing the testimonial said: "Follow Kankakee people's example, use Doan's Kidney Pills" (*Jour. A. M. A.*, July 13, 1918, p. 140).

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

A. L. Seeley, Chairman Mayville
 E. W. Toles Lansing
 R. S. Buckland Baraga

Editor and Business Manager
 FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
 On Leave of Absence on Duty
 Medical Reserve Corps, U. S. A.
 GERRIT J. WARNSHUIS, M.D.
 Acting Representative Publication Committee.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Gerrit J. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 26, 1918.

September

Editorials

RELATION OF FATIGUE TO INDUSTRIAL EFFICIENCY.

The adaptation of scientific methods and the utilization of facts revealed by scientific investigation has played a very large part in the carrying out of our immense war program. An example of the length to which such scientific direction has been carried is the study of conditions affecting the working capacity of the industrial workman made by both British and American committees.

Viewed from a physiological standpoint many of their conclusions are interesting.

Different types of out-put curves have been found peculiar to the nature of the work and the number of working hours.

The first type, which most closely resembles the curve of work done by stimulating excised muscle at successive intervals, is found in the kind of work that requires close attention and muscle co-ordination. There is a gradual rise in output during the first two hours followed by an increasing fall until the lunch hour. The out-put is considerably higher after the lunch hour than before due to the recuperative effect of food and rest. The out-put curve is

lower at the end of the second period than just before the lunch hour indicating the cumulative fatigue of the entire work.

The curve produced in simple muscular work often differs from the first in that there is no early rise nor is the rise after lunch hour always present. The curve merely shows a progressive fatigue. Occasionally there is a short rise late in the day which is explained either by a sort of second wind or an emotional stress brought on by desire to finish a certain piece of work or some such incentive.

The third type of curve is found in such instances where the work is purely mechanical and excites little interest and there are frequent intervals of momentary rest. The output in these cases is represented by a nearly straight line and shows no fatigue.

The American committee has also shown that a constant daily out-put from one week to another with little variation is usually an indication that workers are holding it down to a fixed standard and are not working to the limit of fatigue.

Aside from the factors already mentioned other considerations enter into the working efficiency of a man. It has been found that where the working period was so prolonged as to leave too short an interval for complete recuperation the total out-put was reduced. In most cases, it may be concluded that a ten hour day represents the maximum.

Night work is not as productive as day work. Women tolerate night work worse than men. This is so evident that most countries have laws prohibiting women from night work. Women can not put in such long hours on their feet as men can. They endure cold better and heat less.

The familiar belief that whenever fatigue has been unusually great the rest period should be increased has been found to be verified when viewed from the stand point of daily out-put.

While these observations were made largely for economic purposes they have an important bearing on the question of what really constitutes fatigue.

From the scrutiny of these four types of out-put curves one is justified in concluding that the important element of general bodily fatigue is a nervous depression or relaxation.

The greater the strain on the nervous system in the kind of work performed the more variable does the out-put curve become. On the other hand, work characterized by monotony and frequent pauses shows no fatigue at

all in the out-put. That the fatigue of simple muscular activity is due largely to the condition of the nervous system is shown by the fact that by voluntary effort the out-put may be increased in the latter part of the working spell.

We may consider this nervous relaxation producing the signs of fatigue as due primarily to an exhaustion of the substance of the nerve cells themselves, the Nissl bodies if you wish, or if we incline toward the internal secretory theories of Crile and others, it may be held to be due to a using up of the hormones such as adrenalin and thyroid secretions which maintain the tonicity of the nervous system.

The more conservative view would hold that the functioning of the nerve cells is dependent on both and that whatever effect the internal secretions have on the nervous system is brought about by a ferment action on the substances of the nerve cell.

This is only a secondary consideration, however. The important conclusion deduced from this study of the daily out-put of industrial workers is that the problem of increasing the working capacity and endurance of a man must center upon the factors that conserve and develop the nervous system. Some of these factors such as sleep, work of a sustaining interest and purpose, good food, fresh air, abstinence from stimulants, and freedom from mental and emotional stress are sufficiently well known.

A most important essential, however, and one that is most frequently overlooked by the very men on whose nervous resources the greatest demands are made, is a powerful circulation of the blood that can only be attained by regular systematic exercise. Incidentally, it is our belief that exercises which tend to develop the thorax and shoulder girdle are most valuable. In a study we have recently made of the measurements of railroad train men it was found that a well developed thorax was invariably associated with a robust circulation. On the contrary, every man with a chest measurement of less than 33 inches was under nourished and had physical defects of one kind or another.

THE NEXT CALL.

We are trying to be calm about this—to hold ourselves to our every day tasks and obligations while our “boys” are making glorious history “over there.” The dash and strategy of the first great American offensive have

swept the enemy into a route. The blood of our country's best, some of them our own friends and neighbors, is flowing like water to save us from the arrogant aspirations of the paranoiac disciples of Nietzsche and Bernhardi while we sleep in peace and work unmolested.

A short time ago word came to us that one of Michigan's doctors had laid down his life on the field of battle. Another has received a cross of honor for gallant service. Verily, a beginning has been made; but we must be calm.

The ex-mayor of the greatest city in the land dies in the uniform of an army major. The son of a former President falls dead from a German bullet.

But do not let us be disturbed; we have our work to do.

Today we saw a mother marching to the railroad station with her son. There she said good-bye and went home alone. Soon she, too, will be scanning the casualty lists. Hundreds of other mother's sons marched with them; but we must be calm, this is only a matter of course, *C'est la guerre*.

The work at home must go on small glory though there be in it. There is no honor equal to that of fighting for the protection of one's country.

The question most important is how can we continue our activities of peace times, without reducing our maximum fighting efficiency? It is our duty to those men who are offering their all to see that there are no shirkers left behind.

The call will soon come for every able bodied doctor to enter the service. In fact, we are face to face with that issue now. What are you going to do about it? Temporize, you can not. Posterity will sit in judgment on your decision; dead men's faces will haunt you; the sneers and taunts of women, whose men have given themselves, will deride you if you fail of your duty.

Understand, this is not a question of how much more you will be sacrificing than the other man. When you have offered your body and your time you have offered everything that counts. The possessions, the influence, the social position you may have obtained can not be balanced against the life that another man has devoted to the cause.

There are only two conditions that are recognized as justifying a man for not applying for a commission. They are physical disability and industrial necessity. Woe unto

you, craven coward, if you are hiding behind a woman's skirts or clutching at a child's hand. Pity for you if you exult that you are above the age limit of the draft law. Those who are sending their brothers and sons and fathers out to die will feel no tender mercy toward you.

It is time that we know the sheep from the goats. Let the war committees issue suitable insignia to those who are honorably exempt from serving. Questionable cases may be referred to the State War Committee. In this way only can we discharge the obligation that is upon us as leaders in national sentiment and thought. Let the profession of Michigan take the lead in showing the world that our pride and honor hold a greater compulsion upon us than a federal law. We have maintained a heroic record so far. We must continue it.

Editorial Comments

The Journal can not be accused of exaggerating when we call attention to the fact that it contains original articles in this issue of more than passing interest. We refer particularly to the article by Connell, the author of the Connell suture. To the general surgeon nothing can be of more practical importance than a discussion of the "Acute Abdomen."

The Edwards bill should receive the hearty support and approval of the medical profession. This bill was presented in the House of Representatives for the purpose of improving the status of pharmacists in the U. S. army. It creates a pharmaceutical corps under the control of a pharmacist director with the rank of major. Regular pharmacists will rank as lieutenants.

We believe the efficiency of the medical corps will be greatly enhanced by giving pharmacists this recognition that is due them.

The following plan is imparted to our readers as a means of collecting delinquent accounts. The doctor who reports it states that it has served its purpose satisfactorily. On the reception room table he keeps a book which bears this inscription on its cover: "Unpaid Accounts—People in Arrears Who Owe Me." In it is placed the names of patients who have refused to pay their accounts. This means of publicly announcing delinquents is open to the patients who occupy his waiting room. The plan likewise has a wholesome effect on them for they pay promptly for services being undesirous of having their names posted in that book. When a

delinquent pays his account that is past due his name is erased from the book.

Another doctor reports that he is in the habit of advertising in his local newspaper as for sale the following accounts to the highest bidders. He advertises the name of the debtor and amount owing. He reports that patrons knowing his custom of thus advertising delinquents are prompt in settling their bills.

We impart these two methods without comment. We are not advised whether a person thus publicly announced as an evader of just obligation might not obtain legal redress for such publicity.

Our good friend, Dr. Fishbine, who edits "Tonics and Sedatives" has endeavored to come back at us for a comment appearing in these columns two months ago. His method of doing so in his "Tonic and Sedative" column was to revamp two so-called anecdotes that went the rounds when spears were the arms of soldiers. We are surprised that he was able to recall such ancient, antiquated quips that have long since ceased to stimulate one's "risor sardonicus." Evidently he has been contributing heavily to that Chicago "game." We feel complimented, however, on having been recognized, even though the thoughts of ancients were employed. Selah.

A month of somewhat intimate life with doctors who have given up practices, home comforts, severed home ties and friends and are working harder than they worked at home, submitting to regulations and orders and living in rough barracks evinces our profound respect and admiration. A nobler, better lot of men does not exist. When they come home, and they all have that secret desire, they will be inspired with a new zeal and to them there will be justly attributed a respect and honor that will enable them to resume where they left their work, better men, leaders in their communities.

When in the vicinity of any Base Hospital ascertain the nights when staff meetings are held. They usually occur on two or three evenings a week. A series of extremely interesting cases are presented each night followed by live discussions. The men responding to the draft call and coming from every station of social life produce a wonderful variety of clinical material. You may be assured that the staffs of army hospitals are alert and are profiting by their study of large groups of cases and recording their medical and surgical experiences.

When these men, who participate in these meetings, return home they are going to put new life in our County Society meetings.

Empirical and the principle or selective action as yet wholly unexplained nevertheless the administration of horse serum in 10 c.c. dosage exercises specific action in gonorrheal urethritis and orchitis.

New and old cases of gonorrhea have become free of all urethral discharge in two days to a week. The pain of an acute orchitis relieved in three hours after injection and the swelling disappearing in three to six days. We have seen this happen in not one case but in several. There are those who have observed these results in groups of 100 and 500 cases and know whereof they speak. Try it—10 c.c.s injected in the gluteal or subscapular region and repeated daily for five or six doses. Acute pain is relieved in three to five hours. Let us have the results in your cases.

We learn of some seven hundred herniotomies with but six cases of superficial infections. A month's operative record of 524 cases of major surgical procedures without a fatality. Similar results in other branches of our profession tell of the splendid medical and surgical care that is given to our soldiers. Never have these men experienced such scientific care and attention. Their folks at home need have no worry in regard to their soldier boys in that, yes or any other respect. Camp life is wholesome and moral.

What have you done in the way of patronizing our advertisers? We must have this co-operation from you. Please bear this in mind and make it your constant object to send them your orders. *The Journal* requires this help from you.

Liberty Bonds—of course you have purchased some of each issue, but how about this issue? It is true that you have taken some in payment of accounts. Nevertheless it becomes incumbent upon you to rake into a pile every penny you can lay your hand on and invest it in this new bond issue. Then when you have done that go to your bank and arrange for credit and purchase \$500 or \$1,000 more to be paid by monthly payments. We urge that you buy to the limit and until it pinches you rather closely.

As pointed out in an editorial of *The Journal* of the A.M.A., August 17, the new Selective Service Law raising the draft age of the Army to 45 will come far short of supplying its medical needs even though this law will affect 75,000 doctors. Practically all of these will be given exemption under the same conditions as apply to men of other occupations. The fact that a doctor will probably get a commission has no bearing on the subject of dependents according to a ruling of the Provost Marshal General's office.

Only two methods remain by which the required number of medical officers can be raised. Either special legislation must be enacted or the medical profession must show itself capable of instituting a voluntary draft. We have sufficient confidence in the spirit of the members of the profession to believe that when the survey has been made by the State Societies and doctors are asked to apply for commission they will do so voluntarily and with only one thought, "How can I best help to win the war?"

We would like to see it done this way. We would like to show the world that doctors of this country do not have to be compelled to respond to its needs.

Correspondence

Boyne City, Mich., April 17, 1918.

F. C. Warnshuis, M.D.,
Editor of The Journal.

I refer to such organizations as "The Moose" and "The Eagles," who appoint some doctor to treat their members and the members' family for Two Dollars per member each year. Their argument of free medical and surgical services explains how these orders exist. The physician engaged in this practice cannot charge for his visits and this is the extent of the so-called free medical service theory. I understand that these doctors purchase the cheapest preparations on the market, which they dispense in large quantities to the members, and in that way get even, so to speak, because these people must pay for all office practice and medicines dispensed.

In cases that come under the compensation law I argue that the lodge doctor has agreed to render this service for a certain amount and when liability companies pay these bills the doctor is paid from two sources. Farther cases are on record where men draw more money when not working due to the insurance received plus compensation, as the doctor is anxious to please his brother in the lodge and does not insist on his reporting for work at the earliest possible moment, consequently the surgical expense is increased and liability companies treated in an unjust manner.

These physicians are artists in evading night calls to the members and when another doctor is kind enough to respond and requests his fee, which he seldom receives, he soon finds that the lodge doctor has taken charge of the case and a reflection is thrown on the ability of the man who had manifested a kindly spirit in the matter.

There is no such thing as free medical service, as you cannot get something for nothing, and therefore the members are imposed upon and the sick do not receive a square deal. Medical men engaged in this practice know the system is wrong and some are honest enough to admit this fact. I am glad to say the better class of doctors are not lowering the profession in this manner and yet many lodge physicians are active in medical societies, which is not fair to the ethical man of high professional ideals.

When doctors such as mentioned make visits for nothing we surely have come to the limit.

In conclusion this is, in my opinion, a vital question to the profession at large and I would like to have the expression of opinion from some of my professional brothers.

Yours truly,

HARRY E. SHAVER.

June 3, 1918.

'This is exceedingly interesting work. Our troops have done surprisingly well. We have withstood several heavy attacks and have attacked in turn, capturing a village. With few exceptions, my medical corps men have behaved themselves splendidly; two of them are to be cited in the regimental report—one for dressing his four wounded in a battered-in dugout under terrific shell fire; the other for directing the dressing of others, he himself being shot twice through the shoulder. The last named man walked into the dressing station over a mile away, after he had completed his job. On another occasion, the first man (there being nothing in his own line to do)) tore off his Red Cross, seized a rifle and shot three Germans. You may think this is bad form, but the Germans are now shooting up ambulances and bombing our field hospitals, so anything is fair. The other day I cared for a man wounded in the face so that both lips were badly swollen. Both hands were also bandaged. He called for a cigarette, which I lighted for him, and in spite of the difficulties in manipulating the thing, all swathed as he was, after the first long draw, he announced that was perfectly happy. They wounded one of our automatic out-posts so severely that he fell and dropped his gun. As they ran past toward our first line they jeered and made faces at him. Five minutes later, when the tide had turned and they were running back for dear life, our man recovered his gun and fired off all the clips he had. The enemy call us the Black Snakes, because we are always on the alert. Last night I went with Captain and Lieut. on an observation tour in front of our advanced posts. I found No Man's Land quite uncanny, overhung by a low, thin fog. There was no moon and only the bright stars looked clean. In returning we passed through a small ravine which lingers saliently in my memory. Here five nights before, in a shallow dugout in the right bank, several officers and myself had been caught in an enemy barrage which swept up and down the entire valley, crashing down great trees and knocking the rims off both sides. It was really most dreadful—most magnificent. We excavated two men with picks and shovels. Otherwise, the Lord was with us.

A few days ago the enemy sent over a lot of gas and, as a result, our dressing station hasn't been fit for work since. They landed a gas shell directly into our doorway. All of us are coughing more or less, and one or two caught it in the eyes. We have evacuated a few of the enlisted men on account of gas, but most of them have been well drilled in the use of the mask. It's a great life.

W. W. MANTON, M.R.C.,

Captain 26th Infantry, 1st Division.
Battalion Surgeon A. E. F.

June 10, 1918.

P. S.—"They've held up our mail until we get further back, so I haven't heard from any of you for some time. This is a disappointment since I count on getting your letters every week. This gas business is rotten. Yesterday I went out into the woods and engineered a whole platoon, perfectly helpless, down into the ambulances. It was a cruel blow to our detachment. Blind, famished for air,

vomiting with abdominal pain, they groped along—and these symptoms, in most instances, will get worse as time goes on.

"Shells, shrapnel, machine guns, and grenades are far behind gas for wickedness. The nasty stuff is so insidious.

"Personally, I have never been so well. The Major exclaimed yesterday, 'My, but you have a slim waist.' And I am eating like a horse, too. Incidentally, we haven't changed clothes in six weeks; in fact, we rarely take them off, and then only to search and slaughter bugs. Some days (or rather nights) there is a great deal of work; other nights none. Everything is most irregular, depending both on our orders and on the enemy. We look for relief soon, although I am having a bully time."

(Courtesy of Dr. Walter J. Wilson, Jr.)

France, June 19, 1918.

Dear Walter,

Your letter of May 15th at hand. It was full of news, just what I wanted, and several others have enjoyed it also. You have had your difficulties to contend with, but they seem to be overcome all right.

We here have been sawing wood and have been cheerful about it, too. Jim Matthews is associated with me in my particular hospital and is doing good work and happy in it. He remarked only yesterday that it was like a vacation here. We have our difficulties, too. Monday we had a formal inspection of our hospitals and were commended and congratulated on their condition and the work we had done. It is considered a harder job to run military hospitals in large hotels, but 36 has made a good name and outside fellows envy us. We have received British Tommies lately, as well as Poilus and our own American soldiers. We censor all their letters and every one of them have the best of impressions of American hospitals from ours. You probably get more literature to read than we do and yet I doubt if you know much more about the war. Our news is dope, still we are expecting great events soon.

We have had some beautiful weather, but a grate fire feels good tonight. With best wishes, I am,

Sincerely,

FRANK B. WALKER,
Major U. S. Base Hospital No. 36.

16th Regiment Engineers, A. E. F.,
June 10 1918.

Editor War Bulletin,

Detroit, Mich., U. S. A.

Dear Sir:

About a month ago I saw in one of your war bulletins a request for contributions to keep the good work up. Ever since then I have been on the lookout for American money, because the war bulletin has surely been a good friend over here. At last I have found a torn and tattered American dollar bill, which I am sending herewith. I think it is the first of its genus that I have seen for over six months.

The Sixteenth is still up with the British, having been moved up here at the beginning of the Boche's efforts this spring. Major "Bill" Browne is still

regimental surgeon, and just now I am acting as surgeon for a battalion operating independently. All is well with us—the regiment has had a few casualties, but very few. Just now we are in the throes of an epidemic which was at first thought to be trench fever, but the pathologists now regard it as a type of influenza. They are promising that it will spread to America soon, if it is not already there. I hope it doesn't interfere with any of your summer vacations back there. It has been very mild here.

Give my best to all the old friends around the town.

Sincerely yours,

GLENN L. COAN,
Captain M. R. C.

Somewhere in France,
May 16, 1918.

My Dear Doctor:

* * * * Now just where to begin I don't know for I seem to live with my hat hung up on a temporary peg. At present I am in a Normandy city in the War Zone and quite among strangers as there are few Americans here except at the hospitals which are manned with U. S. doctors and nurses but care for British soldiers principally. These camps are located outside of the town, while those within are naturally French. Yes, I am in a bevy of activities and part of many myself. One simply talks on the surface these days when writing and so I must to you.

I wonder if I could ever become hardened to the pictures that confront me at every town. I think not; on the contrary, my heart literally bleeds times without number every day. And the scenes, the terrible pictures of the refugees are such that they indelibly print themselves on one's mind. Often as many as 1,100 of these destitute, war-starved people pass through my hands during a day. I look them over as they enter the barracks the American Red Cross has erected as both canteen and medical dispensary. In a lot of this number I may have to care for the ills of from 40 to 50 and of these quite a few will prove critical; in fact, some even die then and there—especially the very old and very young. No, one's heart could never be hardened because of the nature of the wound. You never saw such pictures and the human mind has to see to really comprehend what they are. I'll be ready for either the lecture platform, whenever the time comes and I may return, or a fit subject for a lunatic asylum. When Dr. Lucas, commander in chief of the Children's Bureau in Paris, comes to Detroit on his lecture tour, ask him to tell you of some of my experiences while on the English Channel with my "699" refugee children. I understand he is using some portion for his talks.

I saw quite a number of our Wayne County Medical Society doctors one day in Paris while attending a meeting. They were—am not sure of all their ranks—Major Babcock, Capt. McGraw, Capt. Hirschman, Capt. Henry Carstens and very recently here I ran into Capt. Shawan. They are all well—well fed and fat.

Remember me most kindly to every one. I am, deeper than ever for the cause.

Sincerely,
MARIA BELLE COOLIDGE,
(A. R. C.)

(Through the courtesy of Dr. H. W. Hewitt we have the following from Maj. H. N. Torrey.)

* * * * We are terribly busy. Have worked nearly day and night since the big drive started north of us, getting our cases directly from the first line—ours is the first hospital. Really an amazing and wonderful experience. We have just cleaned out one bunch, and expect another at any moment. Had 1,200 cases at one time, many bad ones—gas gangrene, compound femurs, foreign bodies everywhere—lungs, brain, etc.

I have been to the front twice in two months—once on the Somme the early part of April—having some exciting experiences there. Then a couple of weeks ago I went over the front in an auto with Spitzley and Hirschman, to see the sanitary organizations. We started at Verdun and went nearly to Switzerland. You can imagine what a great trip it was.

Yesterday I was up for an hour in a big bombing aeroplane—really a wonderful experience. I was surprised not to get any sense of speed. It was like being in a boiler shop—and a very noisy one—suspended in the sky and not moving an inch. When we landed, I thought I would hit on my ear, but after some thrilling maneuvers I lit right side up, and I'm still here.

Best regards.

H. M. T.,
(Maj. H. M. Torrey, Base Hosp. No. 17, A. E. F.)

Deaths

Dr. Lorenzo Towne, Lansing, Michigan, died July 5, at the home of his son, Dr. Lawrence C. Towne, of Lansing. Dr. Towne was a graduate of the Detroit College of Medicine. He was 67 years of age.

Dr. Lyman Crotser, Petoskey, Michigan, age 59 years, died July 25, following a stroke of paralysis.

Dr. William S. Gass, Royal Oak, Michigan, died July 31. He is survived by a wife and mother.

Dr. Charles B. Leonard, Detroit, Michigan, age 38 years, died June 26, following an illness of six months. He was a graduate of the class of 1904 of the Detroit College of Medicine.

State News Notes

FOR SALE—1 Porcelain Operating Table.
1 U. S. Army Folding Operating Table, new,
at 325 Evergreen Ave., c-o C. C. Wood, Owosso,
Michigan.

The members of the Marquette-Alger Medical Society held a picnic at Presque Isle on June 29th. This was the first of three such social meetings the society had planned for the summer. As an example of the friendly get-together spirit, this society may be modeled after.

Word has been received that Lt. Col. Angus McLean, will return in October and also that Capt. C. D. Brooks, President Examining Board, M.R.C., since July, 1917, has been assigned to active duty, and will leave Detroit in the near future.

A banquet was given at Cadillac, July 13, by the Tri-County Medical Society in honor of Captains Ricker and Oden who have left for service in the Medical Reserve Corps. The society was addressed by Drs. Hume, Wardell and Babcock and the Rev. Jonathan Turner.

The city of Detroit has received permission from the Federal government to purchase the site for a new tuberculosis sanitarium and to draw up a contract for the proposed sanitarium. A \$1,000,000 institution is planned.

The Michigan Anti-Tuberculosis Association has got in touch with several hundred men who have been discharged from camp on account of tuberculosis. As a result they have succeeded in placing one hundred under supervision and care.

Lieutenant Jno. W. Sherrick, M.R.C., Ann Arbor, Michigan, has received the military cross of honor of the British government for bravery and devoted service under fire.

Members of the Genesee County Medical and Dental Societies were entertained by Dr. and Mrs. F. L. Tupper at Long Lake on the evening of July 25.

The corner-stone of the first reconstruction hospital to be built in America was laid June 15 in Boston. The hospital is a gift of the Elks of the United States and will cost \$250,000.

Members of the Bay City Medical Society held a monthly meeting at Winona Beach on the evening of July 19th.

Formal transfer of the Detroit College of Medicine and Surgery into the hands of the Detroit School Board took place July 25th.

It is hoped by those who were instrumental in bringing this step about that the college will be the beginning of a Detroit University.

Dr. Wm. R. Vis, formerly of Detroit, has taken up his new work as tuberculosis expert for the city of Grand Rapids.

Dr. Herbert L. Wright of Kenosha Wisconsin, has accepted the position of health officer for the city of Lansing.

An annual picnic of the Eaton County Medical Society was held at Pine Lake, July 25.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

BRANCH COUNTY.

The Branch County Medical Society held its sixth annual picnic at Pleasant Ridge on the 16th of July. Notwithstanding unfavorable weather conditions, there were present a sufficient number of physicians with their families to make the occasion particularly enjoyable. An excellent dinner was served by a committee of ladies on the porch of the hotel.

A business meeting of the Society followed the dinner and the matter of the Patriotic Fund recently returned to the Society by the State Committee was taken up, and it was decided that the money should be placed to the credit of the Patriotic

Fund of the Society, subject to the order of the Patriotic Committee, until the end of the war.

G. H. MOULTON, *Secretary*.

EATON COUNTY.

The fourth regular meeting of the Eaton County Medical Society was held at Pine Lake, Olivet, Michigan, Thursday, July 25. The Scientific Program was as follows:

"Goitre and When to Operate"—A. E. MacGregor, Battle Creek.

General Discussion to follow.

If you have any interesting goitre cases arrange to have them at the meeting at 2:30 p. m.

Dextri-Maltose No. 2, Mead's.—A mixture containing approximately maltose, 23.1 per cent.; dextrin, 42.6 per cent., and moisture, 4.3 per cent. On the claim that maltose is more readily assimilable than other forms of sugar, Mead's dextri-maltose No. 2 is proposed for use in the diet of adult invalids. Mead Johnson & Co., Evansville, Indiana.

Book Reviews

LOCAL AND REGIONAL ANESTHESIA, including Analgesia. By Carroll W. Allen, M.D., of Tulane University, New Orleans, with an introduction by Rudolph Matas, M.D., of Tulane University, New Orleans. Second Edition, Reset. Octavo of 674 pages with 260 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$6.50 net.

Since the demonstration of the anaesthetic properties of cocaine by Karl Köller at Heidelberg in 1884 until the present date a wonderful progress has been made in the field of local anaesthesia. The fact that to-day from 60 to 70 per cent. of operations which formerly required general insensibility can now be done with only peripheral anaesthesia is an evidence of the universal demand for such a method and the enthusiastic labor that has been devoted to its attainment.

Dr. Matas has been an early pioneer in this work and himself introduced many of the special operations such as injection of the 2nd and 3d divisions of the trigeminus. In all this work Dr. Allen has been a close associate. The book, therefore, is not a hasty collection of abstracts and pictures built upon a pretentious outline but, on the contrary, reflects in every page the patient toil of years of investigation and practice.

It is a work that may well deserve to rank among the classics in American medical literature.

THE PROTEOMORPHIC THEORY AND THE NEW MEDICINE. By Henry Smith Williams, B.Sc., M.D., LL.D. Published by The Goodhue Co., New York.

The title of this book, it will clearly be seen, is frankly ambitious. The euphony of it, however, is disappointing as the revolutionizing thoughts it suggests fail to materialize into anything substantial or well founded. It is possible that the author through his own sophistry has been sincerely misled into believing that he has discovered the panacea for all human ills, a Ponce de Leon fountain, that will banish the terrors of all disease from cancer to whooping cough. If so, he has our condolences.

We would gather from the perusal of this work that all practices previous to this marvelous innovation were altogether empirical whereas, here we have the only true science. Under the caption "scientific medicine versus empiricism," we read "no man knows how or why morphine or strychnine or atropine or digitaline produce their perennially observed and perfectly recognized effects. With the proteals the case is different." That his own knowledge of pharmacodynamics is limited is fairly well demonstrated when he speaks of the affinity of strychnine for the brain cells it being quite definitely established a number of years ago that strychnine has no direct action on the brain tissues whatever.

There are many fallacies in his argument that

space does not permit us to point out. For example, we refer to his assumption that bacterial toxins have the same molecular composition as polypeptids. The basis for this seems to be the analogy between the hydrolysis of polypeptids by specific ferments and the neutralization of toxins by specific antibodies. Likewise, the attempt to assign to the red blood cells the function of active immunity is decidedly unconvincing.

The therapy the author proposes as a result of these many vague inferences consists of the subcutaneous administration of numerous vegetable protein extracts. Here, indeed, he has seized on something that has been demonstrated to be of value in numerous instances. The author claims most of the credit, preferring to ignore the work along this line of Jobling, Dziembowski, Miller and Lusk, and others that could be mentioned.

We have always admired the erudition and literary power displayed in Williams' writings but we believe his speculations in this field of biological investigation do him scant credit.

A LABORATORY MANUAL OF QUALITATIVE CHEMICAL ANALYSIS. By A. R. Bliss, Jr., M.D., Ph.G., Professor of Pharmacology, School of Medicine, Emory University Atlanta, Ga.; formerly Professor of Chemistry and Pharmacology, Graduate School of Medicine, University of Alabama Second Edition, Revised and Reset. 194 pages, with working tables. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$2.25 net.

Received.

1917 COLLECTED PAPERS OF THE MAYO CLINIC, Rochester, Minn. Octavo of 866 pages, 331 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth \$6.50 net.

These papers touch on a great many subjects of recent and decidedly important interest to surgeons. Based as they are on the abundance of clinical material and research and library facilities that the Mayo Institution offers they have a very great value and have been written in an exceedingly able manner.

Aside from papers dealing with newer methods of technique in operations such as prostatectomy, gastro-enterostomy, cleft palate, etc., there are many papers dealing with such entirely new subjects as Trench-foot, Transplantation of Whole Organs, Resection of Lobes of the Lungs, and The Production of Anti-Poliomyelitis Serum in Horses.

ESSENTIALS OF DIETETICS FOR NURSES. By Maude A. Perry, B.S. Formerly Dietitian and Instructor in Dietetics at Michael Reese Hospital, Chicago, Illinois; Corresponding Secretary of the American Dietetic Association; Red Cross Dietitian for Base Hospital Unit No. 1. Published by C. V. Mosby Co.

This volume represents a course in Dietetics which should prove a wonderful text book for the nurse in training and a splendid book of reference for the graduate nurse. It is very compact and as the title infers, gives the essentials of practical dietetics.

The book is comprised of two sections, each subdivided so that facts contained are easily accessible. Altogether it is well worthy of being considered an admirable book to be added to the list of nurses' text books.

CYSTOSCOPY AND URETHROSCOPY. By Georges Luys, former interne, Hospitals of Paris; former assistant in Urological Department at the Laribosiere Hospital; Laureate of the Faculty of the Academy of Medicine. Translated and edited with additions by Abr. L. Wolbarst, M.D., New York. Price \$7.50.

While a great deal of credit must be given to the originality and enthusiasm of American workers in this field, nevertheless, a treatise by so prominent a French author as Luys will be met with a great deal of interest. We believe that cystoscopy is a highly perfected specialty requiring years of training. Therefore, a book on this subject dealing as this one does, with so much of the technical side of it, will be of concern to the urologist rather than to the general practitioner. The volume contains the observations and studies of fifteen years devoted to this work and includes perhaps the best historical review of endoscopy and cystoscopy that has yet been written. The colored plates are very well chosen and interesting to say nothing of the numerous drawings with which the text is illustrated.

THE TREATMENT OF WAR WOUNDS. By W. W. Keen, M.D., L.L.D., Emeritus Professor of Surgery, Jefferson Medical College, Philadelphia. Second Edition, Reset. 12mo. 276 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1918. Cloth, \$2.00 net.

Dr. Keen is one of the few medical officers who has been privileged to study at first hand the latest methods of the leading authorities in this branch of surgery. The exhibition in one morning of eighty compound fractures treated by the Carrel-Dakin method is only an incident in the work which led to the publication of this volume.

The book is very concise and entirely devoted to practical measures of treatment. While entirely free from personal prejudice the directions for the management of all sorts of injuries are very definite.

Miscellany

Antipneumococcic Serum, Polyvalent, Mulford.—Prepared by immunizing horses with dead and living pneumococci of the three fixed types (Types I, II, III). Marketed in double ended vials containing 50 Cc. each, with sterile needle and tubing for intravenous injection. H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, June, 22, 1918, p. 1923).

Antipneumococcus Serum.—A serum obtained from horses immunized with virulent pneumococci. Each lot of antipneumococcic serum is submitted by the manufacturer to the U. S. Hygienic Laboratory for potency test. Early massive (from 50 Cc. to 10 Cc.) intravenous doses of a highly potent serum prepared from the type of pneumococcus present in the case to be treated are necessary. The serum used should be obtained from an animal with pneumococci of the type corresponding to that present in the special case under treatment. Thus far Type I serum alone seems to be on reasonably secure clinical grounds.

Sodium Versus Potassium.—When the embargo was declared on Germany, the price of potassium

salts in this country began to soar. Now steps are being taken for the production of potassium in this country. In the meantime the plentiful sodium salts may, in most cases, be used instead. There is no evidence that potassium salts are superior therapeutically to sodium salts, and they are very much cheaper. Sodium acetate, sodium bicarbonate, sodium bromid, sodium chlorate and sodium hydroxid are among the sodium salts which may with advantage replace the corresponding potassium salts. (*Jour. A. M. A.*, June 1, 1918, p. 1601).

Misbranded Nostrums.—The following preparations have been investigated by the Federal authorities and their proprietors convicted under the Federal Food and Drugs Act: Dr. Swan's Liver and Kidney Remedy, containing alcohol, sugar, glycerin, sodium salicylate, strychnin and some laxative plant drug, with indications of juniper.—Stuart's Calcium Wafers, containing strychnin, despite the claim that it contained no poisonous ingredient.—Turpentine Man's or Tyding's Remedy, a glucose sirup containing potassium iodid, alcohol and traces of salicylic acid, phosphates, calcium and alkaloids.—Henry's Red Gum Compound, containing heroin, chloroform, alcohol, glycerin and sugar.—Athlophoros, a solution of glycerin, sodium salicylate, oil of cinnamon and water.—Dr. Thatcher's Cholera Mixture, containing alcohol, morphin, a laxative drug, sugar and aromatics.—Dr. Thatcher's Amber Injection, containing alcohol, opium and zinc sulphate to which acetic acid had been added.—Abbott Bros. Rheumatic Remedy containing 24 per cent. alcohol with 5 grains potassium iodid to each teaspoonful with extracts of drugs such as sarsaparilla and dandelion. (*Journ. A.M.A.*, June 1, 1918, p. 1624).

Prescription A-2851.—Eimer and Amend write that the reported analysis of their "rheumatism remedy," Prescription A-2851, by the Louisiana State Board of Health was incorrect in that it failed to state that 45 per cent. of it was wine of colchicum and in that it contained 9.3 per cent. and not 7.5 per cent. of potassium iodide. On the basis of the manufacturer's statement, each dose of the remedy contains 27 minims of wine of colchicum—almost a full dose. Colchicum is so uncertain that its use in products of the home remedy type should be unhesitatingly condemned (*Jour. A.M.A.*, June 20, 1918, p. 215).

Vaderol.—A rather expensively prepared advertising card, forwarded by a medical officer in France to the Surgeon General's office in Washington, read: Urinary Duets—Ancient and Recent Runnings—Cystitis, Prostaticis, Filaments—Speedy and Radical Recovery by means of the Vaderol—Used in the Urological Establishments of the Armies. The card is an interesting evidence of the attempt of a French patent medicine maker to exploit the English speaking soldier now in France (*Jour. A.M.A.*, July 20, 1918, p. 215).

Micrococcus Neoformans Vaccine.—This was admitted to New and Nonofficial Remedies in 1910 since at that time it gave some promise of therapeutic value. It has now been omitted because at

the present time there is no evidence that the vaccine is of the slightest value and because its lack of value is demonstrated by the fact that during these years it has not made a recognized place for itself in therapeutics. The available information indicates that the micrococcus neoformans does not differ materially from ordinary skin cocci which are described in New and Nonofficial Remedies under staphylococcus vaccine (Reports of the Council on Pharmacy and Chemistry, 1917, p. 152).

NuTone.—This "nutritive tonic" is said to have the following complex composition: Cod Liver Oil, Pure Norwegian, 25 per cent., Malt Extract, 9½ per cent., Beef Juice, Glycerine, Hypophosphite Lime, Hypophosphite Soda, Chemically pure, 1½ grs. each to the oz., Fl. Ext. Nux Vomica, 3-64 of a minim in each teaspoonful. It is advertised with claims that will lead thoughtless physicians and a confiding public to depend on it in cases in which fresh air, hygienic surroundings and nutritious food are prime importance. Adults are to take this preparation as a "nutritive" in doses which represent from 3 to 12 grains of sugar and 8 to 30 minims of cod liver oil with unstated, but probably equally small, amounts of beef juice. The Council on Pharmacy and Chemistry declared NuTone inadmissible to New and Nonofficial Remedies because it is an irrational, shotgun mixture advertised indirectly to the public with unwarranted therapeutic claims and a non-descriptive therapeutically suggestive name (Reports of the Council on Pharmacy and Chemistry, 1917, p. 154).

Proteal Therapy.—Henry Smith Williams, who expounds the use of his "Proteals" for the treatment of cancer, tuberculosis and many other diseases, is better known in the journalistic world than in the field of scientific medicine. A few years ago, Dr. Williams appeared interested in the Autolysin treatment of cancer which at that time was being exploited. The present "Proteal" treatment appears to be a modification of the "Autolysin" treatment. Dr. Williams, in attempting to justify the use of his "Proteals" in tuberculosis, cancer, rheumatism, etc., takes advantage of certain investigations bearing on the non-specific reactions resulting from the parenteral injection of foreign proteins (*Jour. A.M.A.*, July 6, 1918, p. 58.)

Ophthalmol (Lindemann).—The Council on Pharmacy and Chemistry publishes a report declaring Ophthalmol (Lindemann) inadmissible to New and Nonofficial Remedies. The preparation is advertised for the treatment of eye diseases. It is said to be an oily solution of "glandular extract of the fish *Cobitis fossilis*," but its composition is not definitely declared. The Council rejected Ophthalmol (Lindemann) (1) because the use in eye of an irritant of secret composition and of uncertain activity is unscientific and against the interest of public health; (2) because Ophthalmol is of secret composition, and (3) because no evidence has been submitted to substantiate its superiority over established methods of treatment (*Jour. A.M.A.*, July 6, 1918, p. 59.)

The Italian Consumption Cure.—Daily papers

have purported to give an account of a new alleged cure for pulmonary tuberculosis said to have been "discovered" by Professor Domenico LoManaco, of Rome. The treatment is said to consist of the subcutaneous injection of sugar—the particular form of sugar not being specified. Italian medical journals and medical publications from other European countries appear to contain no reference to this latest "discovery" (*Jour. A.M.A.*, July 13, 1918, p. 142.)

Silvol Inadmissible to N.N.R.—The Council on Pharmacy and Chemistry reports that Silvol (Parke, Davis & Co.) is a silver protein preparation of the Argyrol type. Its physical properties are similar to those of Argyrol, and, like Argyrol, it is said to contain about 20 per cent. of silver. Like Argyrol it is non-irritant to the nasal mucosa in 10 per cent. solution. About the same claims are made for the local use of Silvol as are generally made for Argyrol, and these may be accepted. In addition, however, claims are made which are doubtful and which require substantiation. As the manufacturers have presented no evidence for their highly improbable claims, and as they have not signified any intention of making their claims agree with substantiated facts, the Council declared Silvol inadmissible to New and Nonofficial Remedies (*Jour. A.M.A.*, July 13, 1918, p. 140.)

Uinctol.—This is a paste stated by the R. R. Rogers Chemical Co., San Francisco, Cal., to contain approximately 40 per cent. metallic mercury in a soap base. It is sold as a substitute for mercurial ointment with the claim that it is more efficacious. The Council on Pharmacy and Chemistry declared Uinctol inadmissible to New and Nonofficial Remedies because the claim for superiority over mercurial ointment is not substantiated and constitutes an unwarranted therapeutic claim; the name does not indicate the composition of this pharmaceutical mixture and because the circular wrapped with the trade package advertises proprietary preparations not accepted by the Council (Reports of the Council on Pharmacy and Chemistry, 1917, p. 162).

V-E-M Products.—The Schoonmaker Laboratories, Inc., New York, market V-E-M Unguentum Eucalyptol Compound, V-E-M with Ichthyol, V-E-M with Stearate of Zinc, V-E-M with Camphor, V-E-M with Boric Acid. The Council on Pharmacy and Chemistry declared these preparations in conflict with its rules because unwarranted therapeutic claims were made for them; because the public was advised to depend on them in the treatment of diseases and because these combinations of ingredients in fixed proportions under proprietary names are irrational (Reports Council on Pharmacy and Chemistry, 1917, p. 163).

Dextri-Maltose No. 3, Mead's.—A mixture containing approximately maltose, 52 per cent.; dextrin, 41.7 per cent.; potassium carbonate, anhydrous, 2 per cent., and moisture, 4.3 per cent. In the belief that an addition of potassium salts counteracts a tendency to constipation, it is said to be particularly adapted in the feeding of constipated infants. Mead Johnson & Co., Evansville, Indiana. (*Jour. A.M.A.*, July 20, 1918, p. 193.)

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVII

GRAND RAPIDS, MICHIGAN, OCTOBER, 1918

No. 10

Original Articles

CASE REPORTS OF TWO INSTANCES OF KIDNEY CALCULI; ONE EXHIBITING A SEQUELA OF PRIMARY CARCINOMA AND THE OTHER OF PERSISTENT SINUS FORMATION FROM THE URETER TO THE EPIDERMIS.

JAMES E. DAVIS, A. M., M. D., F. A. C. S.
DETROIT, MICHIGAN.

Malignancy of the kidney is said to prevail in from one to three per cent. of all malignant neoplasms and the leading symptoms are hematuria, pain at first slight, but later increasing to a marked severity, and cachexia. Pain persisting after the removal of a calculus is a very suggestive symptom of malignancy.

Martin and Mertz after an exhaustive review of the literature found but 108 cases of kidney malignancy associated with calculi. The cases reveal the frequency of the condition to be five times more frequent in the male than in the female. The calculi symptoms averaged 19 years in duration and malignancy symptoms about 5 months. The average age of occurrence was 50 years.

The primary epithelial tumors of the pelvis and ureters were present in 26 per cent. of all cases while primary epithelial tumors of the renal parenchyma associated with calculi occurred in 35.1 per cent. of 83 cases.

Epithelial neoplasms were associated with calculi in 64 per cent. of cases. Cystic tumors were next in frequency and the mesotheliomatous and sarcomatous growths were the least frequent.

Case I. *History*.—H. H., Englishman. Age 47. Occupation: loom fixer in woolen mills for 35 years. Married. Father of seven children. The family history was negative excepting that his mother suffered from some type of tumor, her death however resulted from an accident.

In personal habits he used alcohol and tobacco freely but not to excess. His appetite, digestion and bowel movements have been normal. Urination had been increased requiring him to rise once per night. He denied venereal infection.

On Aug. 9, 1915, the patient had a fight with a fellow workman but no known injury was sustained over the renal region but 48 hours later for the first time in his life he passed blood in his urine. This continued in small amounts for two days and was not accompanied by pain. This painless hematuria was repeated irregularly for 3 weeks and was then accompanied by some pain in the left hypochondrium which radiated into the bladder and testicle. During the latter part of September the bleeding ceased but he lost strength steadily and the pain became constant. On Oct. 14, 1915, without apparent cause he began passing large quantities of blood and had to go to bed. Six days later the first attack of severe pain occurred and located in the left hypochondrium. With this attack there was hematuria and fever but no bladder symptoms.

The physical examination made Oct. 22, 1915, gave the following record: The patient was fairly well nourished but gave evidence of being very ill. He was very weak, cachectic, and had dilated veins of the nose and face, the pulse was weak and its rate was eighty per minute. The lungs were negative to physical examination and fluoroscopy, notwithstanding a persistent hacking cough had troubled him from the onset of his illness. Slight tenderness was elicited over the upper left abdomen and over the urinary bladder but was very marked over the lower left abdomen. The left testicle was tender and swollen. There was a left sided inguinal hernia for which he wore a truss. The urine contained 150 pus and 200 blood cells to the $\frac{1}{8}$ objective and there was a small amount of albumen.

The primary radiogram taken when his hematuria began suggested a plugging stone at the uretero-pelvic orifice.

Cystoscopy showed hyperemia and some retraction about the left ureteral meatus and obstruction was encountered high in this ureter. The collected urine from the left kidney contained pus, blood, albumen and but .3 per cent. urea. Phthalein did not appear from this side in forty-five minutes.

Pyelography showed that but little carentos entered the left kidney pelvis and two free stones were demonstrated by their blurred shadow.

Nov. 6, 1915, a lumbar nephrectomy was performed (by Dr. Martin). The kidney showed separation into two cavities and longitudinal section showed

*A preliminary report of this case was read before the Mississippi Valley Medical Association Meeting at Indianapolis in 1916 by Drs. Martin and Mertz of La Porte, Indiana.

a tumor arising from the pelvis. This tumor was hard, brittle, nodular on its surface, grey in color and invaded the central portion of the kidney. The calculus had induced back pressure so as to destroy nearly all the kidney secreting substance. The ureter was free and the peripelvic fat showed no evidence of a new growth. The tumor was found to be a primary alveolar carcinoma of the kidney pelvis. Six months after his nephrectomy the patient began work in the Clinton Woolen Mills as a night watchman. After continuing in this position for 2 months, pains developed in the left groin and radiated into the testicle and upwards to the back into the site of the left kidney. These pains became constant every day and were worse at night.

In August, 1916, he entered the University of Michigan Hospital for examination. In October, 1916, he returned to the same hospital seeking an operation for varicocele. An operation was done at this time for left inguinal hernia and varicocele which had developed two years previous to his nephrectomy. This operation did not succeed in relieving his pain.

On Feb. 3rd., 1917, the writer saw him at Clinton, Mich. in consultation with Dr. R. A. Davis. At this time his symptoms caused him to seek an operation for varicocele which was refused.

Examination.—His chief complaints were of pain in left groin, left testicle, in the back and down the left thigh, steady loss of weight and constipation.

The pulse rate was 128, temperature 100 F. (at 1 P. M.), respirations 19. The circulation was inadequate, the extremities being cold and the nails of a dusky color. The chest examination was negative. The abdomen exhibited a scar $3\frac{1}{2}$ in. long parallel with Poupart's ligament. The left lower abdominal quadrant was tender, the greatest tenderness being felt two and three inches inside and above the mid portion of Poupart's ligament but this did not appear connected in any way with the hernial scar. A tumor mass could be felt in the above position by lateral rotation of the underlying tissues. There was tenderness extending upwards over the normal line of the left ureter to its kidney site.

On Feb. 25, 1917, the patient entered Providence Hospital, Detroit, insisting upon an exploratory operation. He was able at this time to walk with the aid of a cane but was unable to straighten his left leg without considerable pain. There was almost constant pain in the left lower abdominal quadrant. This pain radiated to the left lumbar region and into the left testicle. The pulse varied from 80 to 120; the temperature was 99.2-5 and respirations 20. There was some bulging in the left posterior lumbar area between the iliac crest and the last rib and there was slight protrusion in the upper part of the left lower abdominal quadrant. Palpation showed a firm, nodular, immovable mass.

Upon exploratory incision made Feb. 28, 1917, a mass as large as the patient's fist was observed in the left pre-kidney region and extended from the lower border of the 12th rib to the anterior superior spine of the ileum with its inner border close to the abdominal aorta and outer border reaching the mid axillary line. The convexity of the mass was forward and presented a number of pigeon's egg sized

nodules. The base of the tumor mass was everywhere firmly adherent and more than filled the entire left kidney fossa.

The liver surface was smooth and the pylorus was free and not enlarged.

The subsequent course of the case was slow and there was considerable pain. In the second week following this exploratory incision a hemorrhage equal to one pint in quantity occurred in the mid portion of the laparotomy wound excepting for this there was but little to record until March 20, when elevation of temperature and increase of pulse occurred. On March 23rd he had a severe chill and the temperature rose to 103.2, pulse to 128 and respirations to 20. The elevation of temperature and increased rapidity of pulse continued until March 27, 1917, when he died. The mental condition remained clear, and there were no clinical symptoms of pneumonia. The terminal picture being that of sepsis and circulatory failure.

The blood examination on March 27 showed Hgb. 80%, R. B. C. 5, 720,000, W. B. C. 17,250, N. 86, L. M. 4.

P. M. Examination: 2 hours after death.

Subject.—Well nourished and apparently about 50 years of age. Three scars were seen: one over the left kidney area, one in left inguinal region and one at the left border of the left rectus abdominis which was incompletely healed in its mid portion. The left limb was flexed at an angle of 45 degrees but could be straightened. There was marked bulging of the posterior left lumbar region.

Edema.—Was slight in feet and legs.

P. M. percussion: was dull over the lower left lobe of lung and flat over left side of the abdominal cavity. The left abdominal cavity contained a very small amount of serous fluid and a mass which was larger than the patient's head. Its removal was very difficult. Two coils of ileum were adherent for two or three inches to the anterior median side of the mass. The left ureter was found dilated at its upper end and was free from malignancy. It was easily stripped free to the bladder.

The tumor mass was firmly adherent to the posterior parietal wall and was richly encapsulated in fat. The central portion of the mass was softened and in many places was considerably degenerated—liquefaction necrosis being evident in numerous areas. The upper border of the mass was adherent to and involved by contiguity the lower portion of the spleen and a portion of the left side of the diaphragm.

The right kidney showed a simple hypertrophy equal to double its normal size.

The liver was smooth and somewhat pale and showed some fatty degeneration.

The lower lobe of the left lung was deeply congested but containing air.

The heart showed a small septic ante mortem thrombus in the right ventricle and the myocardium was somewhat softened.

Microscopical section of the tumor mass showed advanced Medullary Carcinoma, but did not present the same architecture as shown in the earlier section. The alveolar formation had changed to ramifying strands of epithelial cells.

Case II. *History.*—Mrs. M. S., age 42. Housewife. Married for 19 years and has had eight

pregnancies. One miscarriage occurred at 2 months, and one at 5 months. One premature labor occurred at 8 months, the child lived but 5 days. One child died at 5 months of age from convulsions. Four children are living. The regular body functions have been normal. The menstrual history began at 12 years and continued normal until affected and suppressed by a recent illness.

The family history was negative excepting that one sister died of erysipelas and one died of appendicitis. The patient had not been ill previous to her child-bearing period. During her puerperium she had two infections with local manifestations of phlegmasia alba dolans.

One pregnancy was interrupted at 5 months by a kidney insufficiency; there being almost total suppression of urine at this time. Following this miscarriage there was infection and a long tedious convalescent period lasting three months. During this period there was marked soreness over the right kidney.

It is to be noted that during a pregnancy two years previous to the one just described there was a noticeable diminution of the urinary output during the eighth month. Delivery however was made at nine months of a living child. In 1905 the patient had a single attack of acute appendicitis for which she was operated and recovery was prompt and uneventful.

In August of 1915 an edema of the right foot and leg with pain in the back appeared with recurrences at irregular intervals for about one year.

In June of 1916 a chill with fever and pain in the back came on suddenly. Shortly after this time, on the 28th of June 1916 she entered Providence Hospital and was operated on July 12th by Dr. Y. for kidney calculi and abscess. A pint or more of pus with numerous calculi were removed thru the abdominal route. A second operation was done in Sept. 1916, for drainage for perinephritic abscess. The patient left the hospital Oct. 3, 1916, but re-entered 5 weeks later because of a recurrence of the perinephritic infection. At this time the patient entered the service of the writer. At operation one half liter of offensive pus was evacuated via the post lumbar route. The pus cavity was definitely and thickly walled off and appeared at the position of the lower pole of the right kidney. About six weeks later, on Jan. 4, when the leucocyte count and general clinical evidence pointed to freedom from purulent infection an exploratory incision was made for the purpose of removing tissues causative of the repeated abscess formations. It was found that there was no remaining kidney tissue and the tissues surrounding the end of the ureter which was patent showed marked cloudy swelling with some areas of fibrous change. Removal of the pathological tissues was made as thorough as possible and cauterization of the urethra was attempted. Obliteration of the ureter was not accomplished by the cauterization as was shown by catheterization a few weeks later and the injection of collargol thru the catheter. The collargol was observed passing freely from the end of the catheter to the outer opening of the sinus thru the epidermis in the post lumbar region.

The patient made prompt recovery after this last operation and has remained in good health to the

present time. For a period of about 8 months since the operation collargol or argyrol has been injected into the sinus about once every seven days. About ten to twenty cc. being used at each injection. For a period of 9 months the injected silver solution which previously was emptied in part into the urinary bladder now is retained in decreasing quantity within the sinus.

Upon four different occasions bismuth injections have been made in an attempt to close the sinus. Closure of the sinus as shown by the radiogram is slowly taking place.

The drainage from the sinus excepting in the early weeks following the operation, when it was serous in character has consisted almost entirely of the injected material.

The patient has gained markedly in weight and has suffered from discomfort only when drainage from the sinus was inadequate from closure or partial closure of its external outlet and occasionally from slight inflammatory change in the dermal scar tissue.

THE EARLY DIAGNOSIS OF PTHISIS PULMONUM.*

DR. J. L. CHESTER
DETROIT, MICH.

I approach this subject oppressed with the question, "what can I say that has not been said, a hundred times better than I can say it, by men who have given it far more thought and investigation than I?" I have no claim to originality and cannot speak with the authority of one who has given time and earnest effort to original research. Therefore I must depend, for the most part, upon what others have considered and settled.

After all I am sure that the simple principles of early diagnosis which are of most value to the public and profession will have been accepted and made practical after long and patient reiteration. The slogan, "shirts off," spoken so often by Dr. De Kleine during the tuberculosis survey must become as familiar as household words. We must not expect results from an occasional dose. The profession and public must be flooded with the truth until thoroughly saturated, and then at least we may expect the public and profession to give attention to these things which so deeply concern them.

SIGNIFICANCE OF HISTORY.

The early diagnosis of Pthisis can be made best from the family history, physical signs, symptoms and history of present illness. The most important links in the chain of evidence are the symptoms. Fishberg says, "There is no pthisis without constitutional symptoms.

*Read before State Medical Society at Battle Creek, 1918.

This is an axiom which cannot be repeated too often."

The family history should be taken carefully in order to learn if the patient has been exposed to infection during infancy. Many now believe that pthisis is a late manifestation of early tuberculous infection. Some one has said, "Pthisis is but the last verse of the song, the first verse of which was sung to the infant at its cradle."

History of present illness should be inquired into in a thorough manner. Attacks of the "grippe," colds, and bronchitis may be brought out by a few questions and each attack taken for its true value.

The most prominent symptoms of active early pthisis—cough expectoration, fever, night sweats, hemoptysis, anoxeria, loss of weight, tachycardia—we shall discuss briefly.

Pidoux says, "Cough is the first and last symptom of pthisis." There are all degrees of the severity of the cough from the mild clearing of the throat in the morning to the violent emetic cough which Pillard says is seen in more than half the cases. In the presence of persistent emetic cough, if pertussis and diseases of the pharynx can be ruled out, we can nearly always make a diagnosis of tuberculosis.

The fever curve is so well known that it need hardly be mentioned. When in doubt the temperature should be taken every three hours during the day for a week or ten days. It will be remembered that the temperature is elevated after exercise and a hearty meal.

The laity considers night sweats a "sign" of consumption and will consult a physician for this symptom alone. Fishberg says, "In typical cases the sweating occurs after midnight and usually runs hand in hand with fever and general condition of the patient."

Early hemoptysis is fortunate for the consumptive because it lets him know his condition at a time when much may be done. There is but little trouble, as a rule, to tell where the hemorrhage is from. A physical examination usually discloses the true nature of its cause. The patient feels below par for some time after an attack of hemoptysis.

Lasegue said, "All patients who eat and digest their food well despite of having fever are consumptives." And Fishberg says, "In acute pneumonic pthisis which is often difficult to differentiate from lobar, or lobular pneumonia, I have placed great reliance on this symptom—in pneumonia the anoxeria is invariably complete, while in acute pthisis the appetite may be

retained more or less, and in spite of a temperature of 103 or 104 F, the patient is apt to ask for nourishment." The appetite, however, may be very capricious.

Richard Morton's triad of symptoms are fever, cough, and emaciation and nearly all people associate tuberculosis with loss of weight. It is remarkable that the muscles over the chest of the diseased lung are the first to waste. Pottinger called the attention of the profession to this sign in 1909.

Tachycardia is an early permanent symptom in about 80 per cent. of the cases.

A low blood pressure is a symptom not often mentioned.

PHYSICAL EXAMINATION.

After history and the symptoms are noted carefully, the patient is more at ease and we may proceed in the following order with the physical examination.—Inspection, palpation, percussion, auscultation and special examinations.

Inspection.—To make the examination have the patient seated on a stool facing the light (and turned from the light when inspecting the back) in a room free from noise, stripped to the waist and thoroughly relaxed. Note the shape of the chest, which in itself, is not of much diagnostic importance. We compare both sides of the chest and look for muscular atrophies, lagging, deformities, anaemia, apex beat, clubbing of the fingers and the condition of the tongue, throat and teeth.

Palpation.—The apex beat should be located and the presence or absence of thrill over the cardiac area be noted. Vocal fremitus and the clavicle illustrated by Pottenger may be of diagnostic value. Corresponding areas of the chest should be compared over and over again, if necessary.

Percussion.—This is the age of gentle percussion and much may be learned by comparing carefully the apex of each lung, and outlining Kronig's space. When there is but little difference in the percussion tone a long deep breath (Respiratory percussion) intensifies the dullness in the diseased lung. We have all been more or less puzzled by long lists of percussion tones. Dr. Bertram H. Waters of New York says, "It is difficult and of questionable advantage to formulate others than:

- a. Normal pulmonary resonance.
- b. Impaired pulmonary resonance.
- c. Dullness.
- d. Flatness.

Which seems to me would be of great advantage if generally adopted.

Auscultation.—Examine first the two sides of the chest during normal breathing. If rales are not heard have the patient breathe faster and deeper (save time by illustrating) and listen again, paying special attention to the high spots—above and below the inner third of the clavicle anteriorly and over the alarm zone of Sargent posteriorly. If rales are not heard, cough near the end of expiration may bring them out. To be of diagnostic importance rales must be localized and persistent. If rales are not heard, we examine the breath sounds which are more difficult. Weak, feeble or "absent" breath sounds and a clear whispered voice sound over the same limited area is an early sign. Cogwheel and rough inspiration are of diagnostic value when persistent, localized and found in conjunction with other signs.

SPECIAL EXAMINATIONS.

The diagnosis can usually be made on the history, symptoms, and physical signs, but special examinations clear up many difficult cases.

The urine should be examined for casts, sugar and albumen. Examination of the sputum should not be neglected. If negative, the examination should be repeated several times.

The X-ray furnishes valuable information and no better record than a good X-ray picture can be kept.

Tuberculin as a test is absolutely worthless in adults, but has a positive value in children. Tuberculin should not be used as a test after the fifth year.

Examination of the blood is of value in difficult cases.

CONCLUSION.

"As a last word on the subject of tuberculosis to the general practitioner," Osler says, "the leadership of the battle against this scourge is in your hands. Much has been done. Much remains to do. By early diagnosis and prompt, systematic treatment of individual cases, by striving in every possible way to improve the social condition of the poor by joining actively in the work of local and national anti-tuberculosis societies you can help in the most important and the most hopeful campaign ever undertaken by the profession."

In conclusion I wish to say the foregoing is only a brief outline. The details cannot be gone into in a ten minute talk, but I would like

to make the following ideas clear: History and symptoms are the most important links in the chain of evidence and, although both may be present, a diagnosis of incipient pthisis cannot be made without physical findings in the lungs. The evidence should all be in—the picture complete—before judgment is passed, if we would avoid error.

REFERENCES.

Osler's Practice of Medicine.
Fishberg. Pulmonary Tuberculosis.
Pamphlet 107. Prepared for the National Association for the study and prevention of Tuberculosis.

DISCUSSION.

DR. BENJ. SHEPARD, Kalamazoo, said that he believed that many physicians do no examination thoroughly enough and consequently do not often make a proper diagnosis. That symptoms which were attributable to Tuberculosis were often ascribed to some other ailment.

The tubercle toxins in the early stages were stimulative to the organism and in the later stages depressive.

DR. WM. KERR, Bay City, said that every body had tuberculosis at some time or other as shown by hundreds of autopsies but fortunately all were not active and the relation of tuberculosis to men of draft age was simply the question of whether the tuberculosis was active or not and would the men break down under training. The presence of moist rales being the only criterion.

DR. WALTER WILSON thought every one should make complete examination because he had discovered heart trouble in conditions which were supposed to be tuberculosis, cough, dyspnoea, etc., and upon examination discovered heart trouble to be the disturbing factor.

In closing Dr. Chester urged thorough examination of patients.

SURGICAL TREATMENT OF PROCIDENTIA UTERI.*

HUGH HAGERTY, M.D., F.A.C.S.
DETROIT, MICH.

In submitting this report for your consideration, I wish to state that I have been six years collecting this group of one hundred and seven cases, of which one hundred and six left the hospital cured, one death which I am reporting, and sixty of the cases I have been able to follow up from one to five years, showing perfect results, further I am indebted to our late friend and excellent teacher Dr. John B. Murphy, whose operation for Procidentia Uteri gave me my first ideas.

Doctor Murphy's operation of splitting the uterus and anchoring the flaps to the abdominal muscles was not a success in my hands. One case had a severe hemorrhage from the

*Read before the State Medical Society at Battle Creek, 1918.

interior of the walls of the uterus, two others sloughed and were many weeks in recovering. After this experience I conceived the idea of anchoring the uterus without splitting it, and this is the result.

This operation applies only to a limited number of cases including women that have passed through the climacteric and those who do not wish to have more children. I believe the surgeon should be careful in his suggestion to patients that have not passed through the menopause. However the most pronounced cases of Procidentia usually appear in patients over forty-five years of age, and I think some other form of suspension as Webster-Baldy or Alexander, a modification of either should be performed on women that are not beyond the child bearing age.

In choosing cases for this operation the surgeon must be careful to avoid carcinoma and any case that has the least suspicion must have microscopical report before operation. Cases of cystocele and rectocele are completely cured. However a relaxed vagina will be benefited by a perineorrhaphy, and an injury to the rectal sphincter must be repaired to obtain the best result.

There are numerous excellent operations for Procidentia, every Gynecologist of experience has his individual technic and they all give good results.

I wish to report three cases:

Case I. Mrs. J., age 47, entered the hospital May 27th, operated May 28th, chest, kidney and all viscera pathologically negative. Mother of four children, two high forceps delivery, complete procidentia. Temperature normal, pulse normal, blood pressure diastolic 70, systolic 125. First and second day after operation pulse 110, temperature normal, no marked pain or vomiting. Third fourth and fifth days, temperature normal pulse did not exceed 100. Sixth day temperature normal, pulse 140, facial expression good. Digaline given hypodermically. Morning of seventh day, pulse 100, good quality, heart sounds normal. On the evening of the seventh day, pulse 140 to 160, not controlled by medicine. Patient died night of seventh day from acute dilatation of heart.

Case II. Mrs. R., age 43, is one of an improperly performed hysterectomy or, perhaps better said an unsuccessful result. Family and childhood history of no importance. Mother of six children. Patient came to clinic complaining of a large tumor protruding from vagina. Examination revealed large tumor, soft reducible, and a large raw eroded surface, tumor filled with intestines, which with tumor were replaced in the vagina. Closer examination revealed that the tumor was bladder and rectum being pouched down by the intra-abdominal pressure. History revealed seven years ago patient had Gillian suspension, which was successful for a

few months. Four years ago complete vaginal hysterectomy, this condition coming on a few months after the hysterectomy.

I closed the peritoneum leaving only room for urination, opened the abdomen and taking the stumps of the round ligaments and the thickened bladder wall, anchored them well into the fascia of the abdominal muscles with strong linen ligatures. Patient kept in bed three weeks, then allowed to get up and reported monthly. For the first three months she was apparently the happiest woman in the world, and after that she complained that the peritoneum was stretching and it did continue to stretch until the pelvic floor is nearly gone, and the patient is in practically the same condition as before.

My object in bringing this case before you is to emphasize the fact that it is not always correct surgery to remove the uterus or even a part of it, this patient might be completely cured if the uterus had not been removed.

Case III. Mrs. D., age 42, entered hospital July 27th, family and childhood history of no importance. Patient married fifteen years, mother of three children, two dead, youngest five years old, complete procidentia since birth of last child. Has complete control of bladder, has had severe irregular menstruation for two years. Patient made uneventful recovery, leaving hospital eighteen days after operation.

HEMANGIOMA OF THE TONSIL.

C. ARBUTHNOT CAMPBELL, M.D.
CLEVELAND, OHIO.

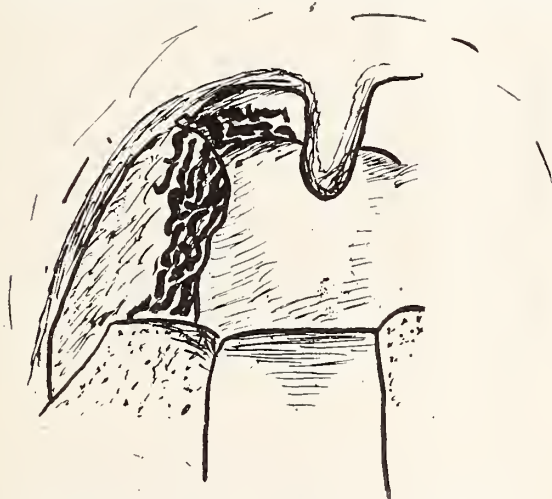
Because of the rarity and danger of hemangioma of the tonsil I believe the following case should be reported. I have looked thru the literature and find nothing in laryngology.

History.—Mr. G. Mc. C. Referred by the courtesy of Dr. Scott of Sandusky. Age 42 years. Occupation farmer. Patient is markedly plethoric. Does not use alcohol or tobacco, altho some years ago was a moderate user of tobacco. Family history is negative for malignancy and tuberculosis. Wassermann negative. Sputum, many staphylococci and few diplococci. Urine negative. Blood reds 490,000 whites 7,500, no differential made. Hemoglobin 98 Sahli. Physical examination shows negative chest and abdomen. No other abnormalities of the vascular system discernible such as hemorrhoids, nevi, varicoceles and etc. Blood pressure S, 160 D, 135. Patellar and Achilles reflex active. No history, signs or symptoms of syphilis. Previous health always good. No throat infections except several attacks of ton-

sillitis. When a child had pertussis. A Neisserian urethritis some fifteen years ago.

History of Throat, Including Present Complaint.—Since a child has had several attacks of tonsillitis but never has had quinsy or diphtheria. About three years ago he began to notice an uncomfortable sensation in the throat (fauces) that caused an occasional cough and dropping of secretion into the throat. During the past several months the cough has increased in frequency and the secretion become more profuse, there is also marked throat fullness but no pain nor the spitting of blood. Hearing normal for watch, voice and tuning forks, no tinnitus aurium.

Examination.—Anterior rhinoscopy shows slightly intumescient inferior turbinates and septum deflection of a low degree. Posterior rhinoscopy is negative except for the condition



Hemangioma of Fauces, Pharynx and Nasopharynx.

described below. Laryngeal examination; the cords are normal in outline, color and mobility. The voice and respiration are in no way affected. Oral examination: Patient's throat was hyperesthetic and the growth was best brought into view when he was put 'on the gag,' altho a dark red, small mass could be seen on simple inspection. The tumor was composed of worm like vessels about 3MM. in diameter. It extended from the posterior one-third of the right tonsil upward, one-half inch anteriorly on the nasal surface of the soft palate, over the right lateral wall of the pharynx from the level of the tongue line to the level of the soft palate line. The involvement was apparently superficial and of the consistency of the ordinary hemangioma.

The patient had been advised to have the tonsilectomy in his home being told 'there was nothing to it.' As his home was on the farm I fear there may have been another fatality to be

added to tonsilectomy as the advisor was poorly equipped to rise to the hemorrhage that surely would have resulted. And a warning may here be sounded, in doing tonsilectomies without examination.

I believe this would be a case for dessication, for as a surgical risk this case would leave much to be desired, because of the mutilation that would necessarily result from the operation. I regret to state the patient has not been seen since the examination and refuses to return altho the seriousness of his condition has been explained to him. If he does return a further report will be made.

AN OUTLINE OF THE PRESENT SCOPE OF PUBLIC HEALTH ADMINISTRATION IN CITIES.*

C. G. PARNALL,
ANN ARBOR, MICH.

No individual can afford the expense of ill health and no community should tolerate the wastage of preventable disease. Self-evident you will say, and yet all thoughtful medical men are keenly aware of the great need of a practical program of applied preventive medicine in nearly all communities, large and small, in this country. The burdens of war and the new problems incident to conditions imposed by war bring us face to face with the necessity for recognizing, before delay has levied a toll of unwarranted destruction of life and usefulness upon our people, the futility of continuing antiquated and demonstrably, inefficient methods for the protection of the public health. In these days of stress it is the duty of the medical profession to advocate measures and means to conserve the health of the civil population as well as to volunteer for service in the military establishment.

In the plan of national, state and municipal organization, public health has hitherto been relegated to a position of relative unimportance. This state of affairs has been disastrous to the public and humiliating to the medical profession. The medical profession, however, has been greatly to blame. The indifference of physicians and often their actual hostility toward the body politic has resulted in a mutual lack of confidence between the doctors on the one hand and the public on the other. At the same time it is not to be argued that the public, through its governmental representatives, has appreciated the need of health protection, or the service of competent and well qualified pub-

*Read before State Medical Society at Battle Creek, 1918.

lic health officials. Consequently the organization and direction of health departments have usually been given over to political friends of the various administrations to whom the official position has been simply a side issue to augment a private practice or to secure favors or advantages, legitimate or otherwise. Under such circumstances public health endeavor has been a matter of little concern either to the officials charged with the immediate responsibility of conducting the work or to the political organization representing the interests of the people. In view of the special need at this time of adequate organization for public health work on a scale not generally hitherto attempted, I would make an earnest appeal to the medical profession of this State to recognize the present problems of public health service and to assume the responsibility for promoting a greatly enlarged program of efficient health organization.

Physicians in any community have an opportunity, through concerted action, to render public service by awakening the people and the governing bodies to the need of much greater recognition of public health work. It takes no argument to convince the ordinary citizen that adequate fire protection is a worthy object of municipal endeavor and funds for the purpose are cheerfully voted. The same is true of police protection. But when it comes to provision for health protection, usually the traditions of old methods and standards prevail, as there are no advocates of modern ideas or advanced ideals to expound their cause and make themselves heard. In the application of measures of economy, therefore, health appropriations are often the first to be curtailed. From too little they are made a little less. In other words, the health service, inadequate though it may be, must suffer retrenchment in order to assure the efficiency of the fire and police departments or other branches of the municipal organization.

This is the condition of affairs confronting us to-day when health protection should be recognized as perhaps the most important single function of any of our municipal undertakings. Notable exceptions can be pointed out and it would be incorrect to say that a process of slow awakening is not in progress. The experience of England and France in the last three years has had a measurable effect. State medicine does not now seem so utterly impossible since the influence and activity of

Dr. Christopher Addison have been felt in the British government.

In order to appreciate the possibilities for service of a modern health department it is necessary to understand the scope of public health activities and their relative importance.

The discovery of new truths and the evolution of methods of disease control have changed our conception of public health work. Formerly greatest stress was laid on control of nuisances and our quarantine regulations. Refuse piles were regarded as incubators of all manner of diseases, faulty plumbing was responsible, in the public mind, for a category of disorders too numerous to mention, and cordons were established around houses sheltering small-pox, streets were closed and distant isolation hospitals or pest houses were utilized in order to prevent the spread of disease, fumigation was depended on to rid the premises of the germs of disease when the germs had long since succumbed. Even Gorgas in Havana instituted the most thorough and rigid clean up campaigns ever undertaken in an effort to control yellow fever and yet yellow fever flourished until, acting on the teachings of Dr. Carlos Finlay, attention was directed chiefly to her ladyship the anopheles mosquito, when, irrespective of dirt, refuse heaps, miasms, and ignorance, yellow fever was destined to be swept from the face of the earth.

Since the real nature of most communicable diseases have become apparent sanitary inspection, control of nuisances, garbage and refuse disposal have become police matters rather than primary public health problems.

In a paper of this length I can dwell only cursorily on the numerous functions of a well organized health department.

First of all perhaps is the problem of organization and administration. To be successful on limited funds a department must be efficiently and economically run. The executive officer must be somewhat of an administrator, familiar with business methods as well as trained in preventive medicine. In cities of medium size, at least, he should have a medical education. The work of the department should be divided into appropriate bureaus with a responsible trained personnel. Authority and responsibility must be centralized and defined. In short, business management methods should be practically applied.

Knowledge of conditions affecting the health and well being of the community is gained through properly directed studies of *vital sta-*

istics. The recording of vital statistics has well been called "health bookkeeping" and is one of the basic functions of an up-to-date health organization.

Perhaps the most important single activity of a city health department, if any single activity may be said to be most important, is the prevention and control of communicable diseases. Without question, the first essential in such control is the knowledge of the existence and location of each case of disease. Here the medical profession must be depended upon for much first hand information. Singularly enough, physicians are often lax in reporting cases unless they are rigidly held to account by active public health officials. The explanation lies in a combination of competition and carelessness. The physician in private practice, unless he is somewhat exceptional, realizes that with the usual health regime he will lose practice if he insists on reporting his cases. Frequently, in order partially to fulfill his obligations to the public he makes a provisional diagnosis, cautions the family to observe "all the precautions" and convinces himself that he has done his duty by the reflection that his colleagues are doing the same thing and that the health department isn't particular anyway—it will only mean more cases for which to account to the unenlightened public. The people, the health authorities, and the practicing physicians are all satisfied and,—they are all to blame.

Tuberculosis is one of the chief problems for any bureau of communicable disease, and venereal disease perhaps equally important. The medical service to indigent persons should be a feature of municipal health work. Usually it will be well to have this activity presided over by a full time clinician instead of jobbing it out for a pittance to some medical derelict who needs the position to keep from starving.

Child hygiene and infant welfare work must of necessity engage the best efforts of any well directed health department. "Save the seventh baby" has become a national slogan especially since a well-known woman's magazine has taken up the issue. Baby saving must begin before the birth of the baby. One-third of the deaths of infants under one year occur in the first week, showing the need of prenatal instruction to mothers. Infant welfare conferences designed to help educate mothers in the care of their *well* babies have a most beneficial influence in any community. School medical in-

spection is intended to detect abnormalities and to see that defects are remedied.

Public health nursing is now recognized as a most potent factor in carrying out a progressive program of health protection. Visiting nurses, especially trained in their work, come into direct contact with the people. They may thus become the advance agents in educating the public regarding the fundamental means for health conservation. They go into the homes giving relief in appropriate cases but their chief value after all is in an educational capacity.

Industrial hygiene in many communities assumes the role of a major division of public health endeavor. Indeed one of the greatest fields for constructive effort in preventive medicine is the study of the effect of modern industrial conditions on the health of the workers. The results of tremendous "speeding up," the effects of economic pressure, the problem of overcrowding, and the question of health insurance as well as the general subject of poverty are all matters requiring thoughtful consideration and immediate action. The future of the nation, indeed, will be endangered if we longer delay a general recognition of the health problems of industrial workers. Now, with the advent of large numbers of women in industry the matter becomes all the more momentous.

Closely associated with industrial health problems are those of living conditions in the homes. Fortunately a splendid housing code has been enacted into law in Michigan. Unfortunately, except in a few instances, no well concerted effort has been made to enforce the provisions of this law. If the code is enforced generally it will put an end to most of the evils resulting from bad housing conditions.

Food inspection has been recognized as an important feature of health work although I must confess that I am of the opinion that, aside from control of the milk supply, this branch is given an undeserved prominence in the popular mind. The examination of food handlers, I believe, is more important even than the inspection of foods.

The control of nuisances, as previously indicated, while important is not to be considered a major function of a health department. The assistance of the police organization should be invoked in the handling of the problem of rubbish and waste disposal. Garbage and refuse should be taken out of the jurisdiction of health departments and placed under streets

or public works. The sanitary inspector's division, of course, should exercise a supervision so that negligence on the part of others may not endanger health. Sewage disposal should be similarly regarded, a health problem only when the appropriate organization fails to functionate properly. The same may be said of public comfort, baths, etc.

Recreation, bearing such an important relation to public health, should engage the attention of health authorities. "Young people of all ages" must have healthful recreation. More and more effort is being made to provide community activities to interest and instruct the people. Parks, playgrounds, concerts, dances, are all matters of public health concern.

Provision for hospital care for the needy and for those afflicted with communicable diseases is a large field in itself. There is a difference of opinion on the part of health authorities as to whether hospital administration is properly a public health function or not. Personally, I believe that all health activities undertaken by a community should be under control of one department with the authority and responsibility centralized.

Community hospitals and community health services are inevitably going to develop to proportions not now realized.

Public health education is a greatly neglected field of health work and a most important one. When we realize how slowly the medical profession accepts new teachings and improved methods it is no great wonder that the general public often views with antagonism the development of modern ideas of public health protection, and receives with alarm the newly established truths of preventive medicine.

Public health work must advance as it receives the support of the people. The desired support will be forthcoming in proportion to the enlightenment the public possesses, and the enlightenment must be provided by a systematic plan of publicity. Education of the masses is, therefore, perhaps the most important item of any progressive public health program.

I have tried to indicate, in a rather fragmentary way, the variety of activities that must be covered by a well organized municipal health department at all times. Now, however, as the war demands new efforts on the part of all of us, I want particularly to call to your attention the need of redoubled energy in providing proper health safeguards for our civil population and our military establishment. The man

behind the man behind the gun must be an object of concern if we are to realize the greatest possible efficiency of our soldiers. Each one who does his task contributes a share in the winning of the war. To keep him fit is a national obligation.

Among the problems in public health protection occasioned by the war are special industrial or occupational diseases incident to the manufacture of explosives and munitions; the effects of the unnatural speeding up of workers; the employment of women in unprecedented numbers; the tendency toward a greatly restricted legitimate birth rate, and an increased infant mortality due to a combination of causes; the increase of all communicable diseases incident to abnormal movement of large numbers of the population; the spread of venereal disease to the extent of a possible syphilization of the nation; the care of the tuberculous; and eventually, the reconstruction of the weakened and disabled both of the military and civil groups.

A realization of the imperative need for much more advanced and adequate public health service now dawns upon the people of this country as well as upon their governmental representatives. This service will soon be demanded and a public opinion created which will not be long denied.

State medicine, socialistic though it may sound, is destined to become a reality. Health will be recognized as the greatest individual asset and public health will assume a position of first importance in the political organization of our government; municipal, state, and national.

DISCUSSION.

DR. DEKLINE emphasized the importance of organized health department and its adaptation to the needs of the locality it is to serve. He said further that our idea of fumigation and quarantine had undergone a great change in the last decade; that it is now known positively that all communicable diseases were transmitted by personal and intimate contact. Consequently the old methods were unnecessary in the management of these diseases. He said that Dr. Parnall was to be congratulated upon the stand that he has taken recently and that he was glad that there was one man in the profession who was brave enough to stem the tide of public opinion and pilot the health department in uncharted waters of efficiency and sensible application of new ideas in its administration.

DR. TOWSLEY, Midland, remarked that the control of disease in the cantonments was an absolute fact and that if it could be done in a cantonment it could be done in a city because there was no difference in organization planning and administration.

DR. ROCKWELL, Kalamazoo, spoke of the importance of the control of preventable as well as the communicable diseases.

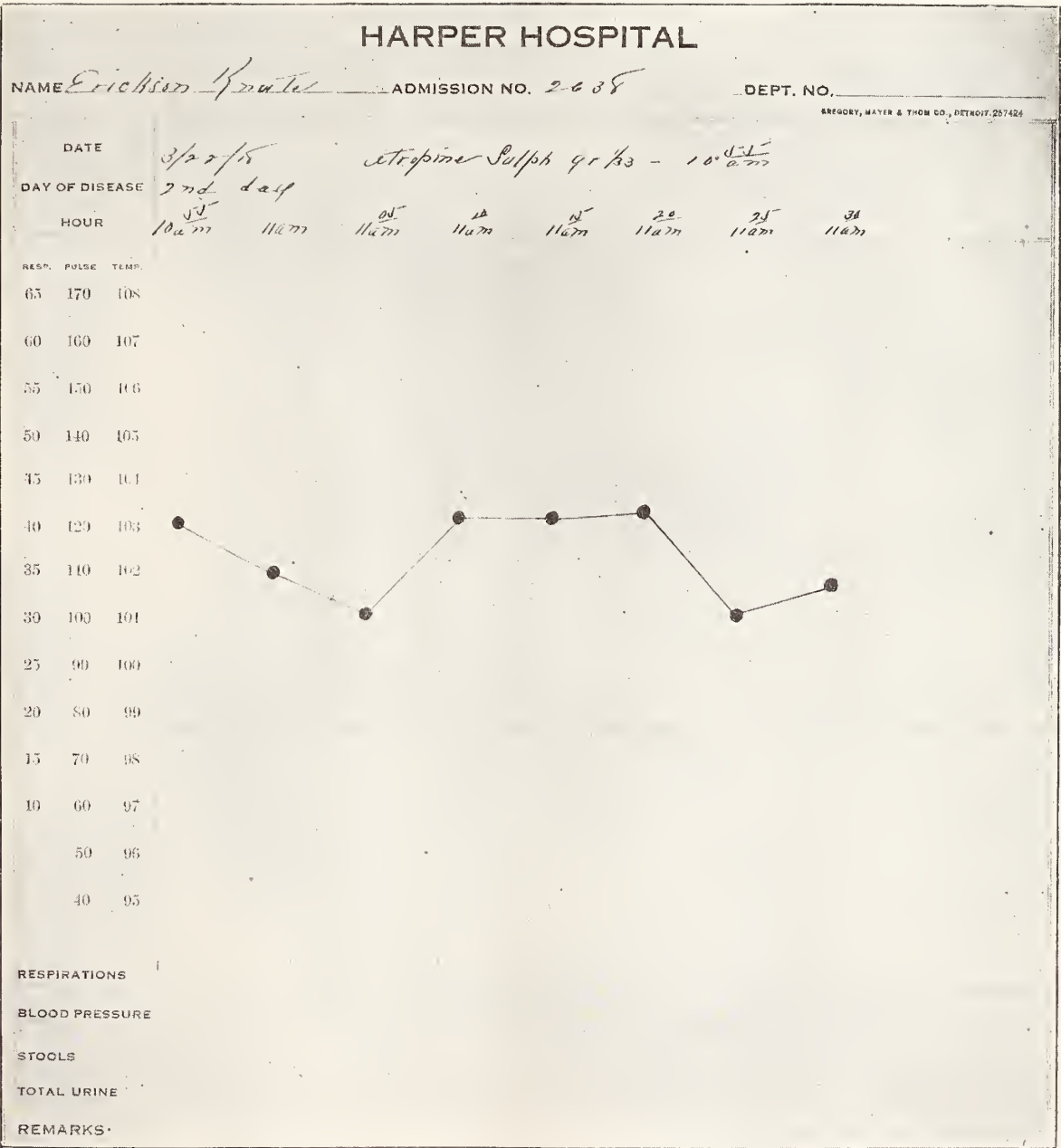
DR. KNAPP, Flint, said the crying need of the hour is keen men who have business ability and professional medical acuity to apply the new things that have and will come out of the war.

DR. GARBER, Muskegon, said that Muskegon had had the unfortunate combination of an osteopath

DIAGNOSIS AND EARLY RECOGNITION OF TYPHOID FEVER.*

DR. E. W. HAASS,
DETROIT, MICH.

If a patient never before the subject of typhoid fever and not recently protected against the disease by preventive inoculation suffers from a fever lasting more than several



and inefficient man who knew absolutely nothing about sanitary engineering. The health department of a city should be taken out of politics and placed in the charge of a trained Sanitary engineer which the Universities are able to supply now.

In closing Dr. Parnall urged all physicians to get behind all movements for the betterment of the city health administration and the relegation of the Political health offices to the dump heap.

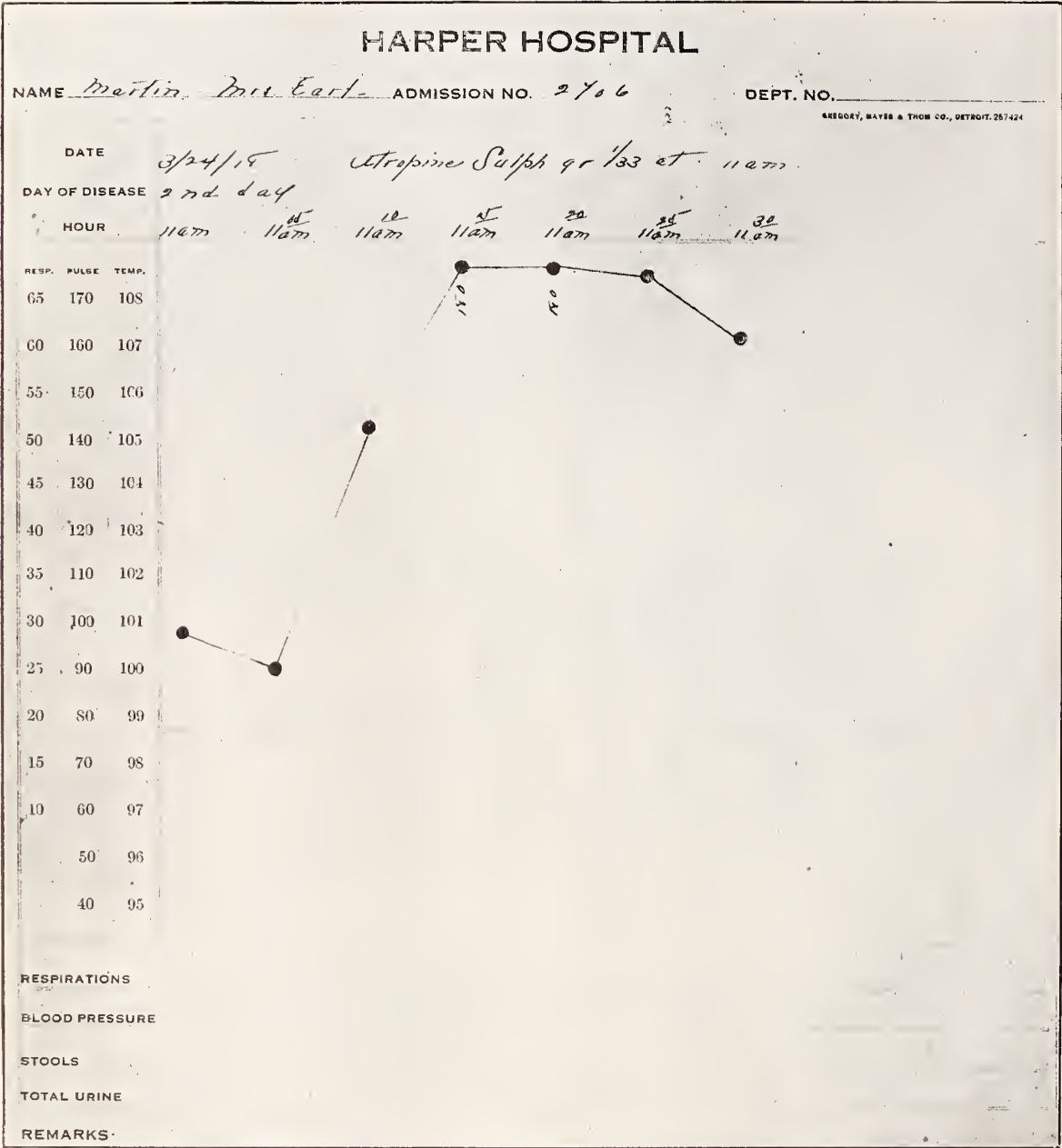
days accompanied by headache, malaise, and perhaps ushered in by nose-bleed, and is without any definite localizing symptoms, such patient, especially if there is a history of a recent trip away from home or contact with carriers, may be regarded as suffering from typhoid fever. If next the temperature course rises

*Read before Michigan State Medical Society, Battle Creek, 1918.

and remains more or less continuously elevated with a relatively slow pulse, the spleen enlarges and rose-spots appear, the clinical diagnosis becomes more certain. Nevertheless certain other diseases may so closely resemble typhoid in its course that great difficulty in diagnosis will present itself. The diseases coming under

to state that if the tests fail to confirm the diagnosis of typhoid, such diagnosis is not justified.

Among such laboratory tests the most specific is the recovery of the organism by means of the blood culture. The organism appears in the blood on the first day of the disease as recog-



consideration in differential diagnosis are endocarditis, tuberculosis especially of the miliary type, sepsis, infections with the colon organism, and less often acute leucaemia, malaria and genuine influenza.

The diagnosis of typhoid must always stand the test of laboratory confirmation. It is safe

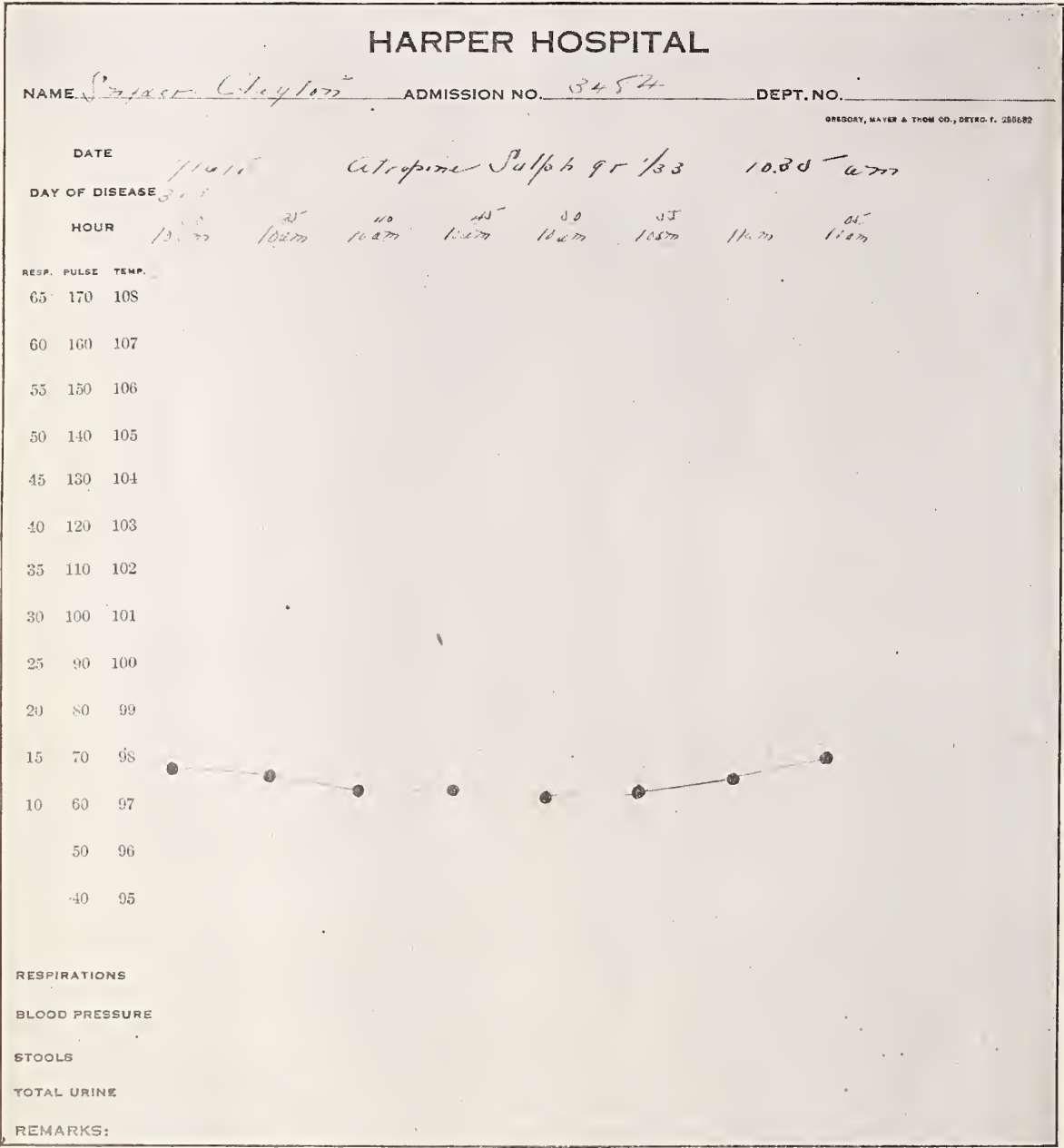
nized by fever, is recovered most easily during the first week but may be found at any time. It may require repeated attempts and is consequently only found in about 75% of all cases but when found is specific as to type and consequently carries prognostic as well as diagnostic force. If, for example, the paratyphoid type

The Diazo test on the urine is positive in about 90% of all cases but is positive frequently in other infections. It is only of value in a negative way, the failure to procure the reaction weighing strongly against a diagnosis of typhoid.

One of the most valuable of laboratory aides,

plication. The leucopenia is due to a relative decrease in the polymorphonuclear leucocytes with the disappearance of essinophiles, these latter not returning until convalescence is established.

Some time ago I went over the charts of cases treated for typhoid fever in Harper Hos-



one most quickly and easily done, is the leucocyte count. This is indispensable in the diagnosis and treatment of typhoid fever. While typhoid in its outset may show an increase of leucocytes, yet when the patient is seen by the physician, the blood picture is always one of leucopenia, unless there be a com-

pital, Detroit. In 1917 there were 23 cases with one death; in 1916, 58 cases with six deaths. It is interesting to look over the blood counts and compare them with the clinical findings.

K had 10,700 with 74% of polys. A pulmonary complication. Blood culture and

Widal positive. Down finally to 5,000. A 6,000; Laboratory positive.
 S 9,600; pulmonary complication. S 3,600; Laboratory positive.
 S 8,300. Bed sores on admission. Mrs. R was brought in and gave a history of
 C 10,000. Mastoid. having attempted an abortion by means of a
 L 12,520; pulmonary complication. bougie after taking 1½ oz. of turpentine daily
 F 8,800; pulmonary. for two weeks. On admission her temperature
 M 5,000; positive blood culture. No com- was 104. pulse 120, respiration 32 (brought in

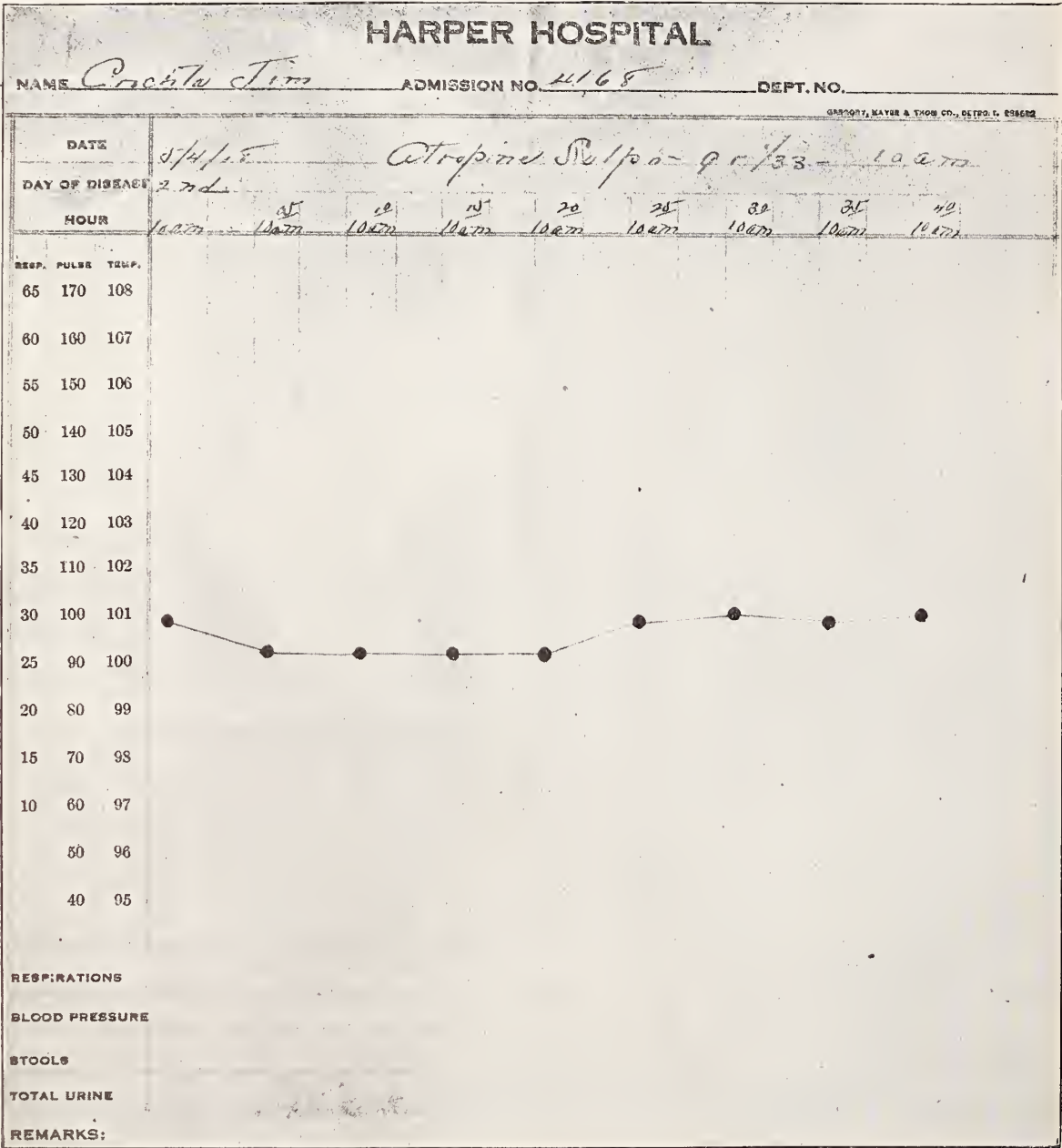
HARPER HOSPITAL			
NAME	ADMISSION NO.	DEPT. NO.	
Bryder Clayton	3484		
DATE	8/10/18		
DAY OF DISEASE	19th		
HOUR	1:25 pm	1:30 pm	1:35 pm
	1:40 pm	1:45 pm	1:50 pm
	1:55 pm	2:00 pm	2:05 pm
RESP.	65	60	55
PULSE	170	160	150
TEMP.	108	107	106
	105	104	103
	102	101	100
	99	98	97
	96	95	
RESPIRATIONS			
BLOOD PRESSURE			
STOOLS			
TOTAL URINE			
REMARKS:			

pliation.
 F 4,000; two negative followed by positive agglutination test.
 S 4,000; positive culture.
 B 3,400; Laboratory positive.
 K 5,300; Laboratory positive.
 K 5,000; Laboratory positive.
 ambulance). She was apathetic, not lively, distended but gave no evidence of peritonitis, had suspicious spots on her abdomen and her spleen was just palpable. A blood count done at once gave a count of 4,000. In spite of intestinal hemorrhages, she recovered and six months later returned to the

hospital and was delivered of a healthy child.

Recently a new test has appeared in the literature. Some time ago Captain Marris of the British Army published the result obtained from the sub cutaneous injection of atropine in typhoid patients. Here we have a practical use

hyperdermically and notes the effect. In normal individuals such injection influences the vagus control on the heart rate and is followed by an increased pulse rate of varying degree. Typhoid patients strangely enough do not respond with accelerated activity, the pulse rate usually increasing not at all or very little.



made of the work of Eppinger and Hess done some years previously on the vagotonic and sympathetic states.

Captain Marris tried to influence the notoriously slow pulse of patients suffering from typhoid by means of atropine. He establishes the pulse rate by counting ten minutes. Then injects 1/33 of a grain of atropine sulphate

An arbitrary standard of an increase of more than ten or twelve beats per minute has been made and rules against typhoid. This can be best illustrated by a few charts from patients in Harper Hospital.

A remarkable accuracy is claimed for this test, as high as 97% of positive reactions in a large series of cases. Mason found it positive

from about the tenth day and usually disappearing on the twenty-first day. Eleven out of sixty-three failed to give positive reactions. Three out of forty-six controls gave it.

Recently two Japanese investigators who approached the subject independently in trying much further employment and interpretation. The severity of typhoid depends upon the baeteraemia, the complications upon the localizations. Our hope in lowering the death rate in view of our laek of specific therapy lies in the prompt recognition of its complications

HARPER HOSPITAL

NAME W. L. H. S. ADMISSION NO. 3665 DEPT. NO. _____

DATE 8/31/18 Atropine Sulph gr 1/32 - 120 pm

DAY OF DISEASE 10th

HOUR	<u>120</u>	<u>20</u>	<u>40</u>	<u>60</u>	<u>80</u>	<u>100</u>	<u>120</u>
RESP.	<u>120</u>	<u>100</u>	<u>110</u>	<u>120</u>	<u>130</u>	<u>140</u>	<u>150</u>
PULSE	<u>120</u>	<u>100</u>	<u>110</u>	<u>120</u>	<u>130</u>	<u>140</u>	<u>150</u>
TEMP.	<u>100</u>	<u>99</u>	<u>100</u>	<u>101</u>	<u>102</u>	<u>103</u>	<u>104</u>

65	170	108
60	160	107
55	150	106
50	140	105
45	130	104
40	120	103
35	110	102
30	100	101
25	90	100
20	80	99
15	70	98
10	60	97
50	96	
40	95	

RESPIRATIONS

BLOOD PRESSURE

STOOLS

TOTAL URINE

REMARKS:

out the vagotomie state elinically in a number of diseases, including typhoid, by means of injection of atropine, as well as epinephrin and other drugs come to different conclusions. However only 1/2 of the dose employed by Marris was injected.

The test while easily earried out requires which are responsible for about 75% of the fatalities. The organism gets into the gall-bladder in every ease of the disease. Indeed the disease may be ushered in by symptoms of gall-bladder infection accompanied by a leucocytosis. Usually gall-bladder complications occur late in the disease, give charaeteristic

antiseptic treatment of all wounds acquired in trench warfare. And recently, Burghard, Leishman, Moynihan, and Wright, the British commission, have submitted a report in favor of the use of hypertonic salt solution and of freely exposing the open infected wound to the air. Dyas, of Chicago, has come out strongly for glycerine 2% bath for all wounds, with the exception of penetrating wounds of the abdomen and lungs. My experience with this agent covers a period of three years and includes eighteen hundred cases of open wounds.

In order to be brief, I will summarize my experience in groups of cases, outlining the

HARPER HOSPITAL

NAME Wellington Samuel ADMISSION NO. 3420 DEPT. NO. _____

DATE 5/4/18 DAY OF DISEASE 28th HOUR 10¹⁵ 1 pm 20 1 pm 25 1 pm 30 1 pm 35 1 pm 40 1 pm 45 1 pm

Atropine Sulph 1/83

RESP.	PULSE	TEMP.
65	170	108
60	160	107
55	150	106
50	140	105
45	130	104
40	120	103
35	110	102
30	100	101
25	90	100
20	80	99
15	70	98
10	60	97
5	50	96
0	40	95

RESPIRATIONS

BLOOD PRESSURE

STOOLS

TOTAL URINE

REMARKS:

open air treatment for infected wounds, but makes a distinct reservation that this treatment should be carried out in a hospital.

In spite of the opinions of these distinguished authorities, I cannot see how I shall be influenced to abandon a treatment which has given me such uniform success as the formaldehyde-method of application, which is extremely simple:

INFECTED WOUNDS OF BURSAE.

Woodsmen, in stepping over logs, frequently flex their knee against an ax, opening the patellar bursae. These are treated by themselves in the woods and frequently become violently in-

fect. I have been in the habit of injecting these wounds full of formaldehyde-glycerine, using a 10cc syringe to which it attached a blunt nosed intervenous cannula. Only a small opening is required and the mixture is allowed to flow out gradually into either a dry dressing or a warm moist dressing. This is repeated daily until the pus is replaced by clear serous discharge.

OPEN WOUNDS OF JOINTS.

In fresh wounds these are thoroughly filled with formaldehyde-glycerine and closed immediately, allowing the surplus fluid to flow out. Michael clips are used for closing the skin and chromicized cat-gut for the capsule of the joint. One or two layers of dry gauze saturated with formaldehyde-glycerine is used as skin dressing. Infected joint wounds are not closed but are injected daily with formaldehyde-glycerine and allowed to drain into hypertonic salt solution dressing.

LACERATED WOUNDS INVOLVING THE EXPOSURE AND CONTAMINATION OF TENDONS.

After being cleansed of all visible organic dirt and oil, the surface of the wound is closed with Michael clips, placed far enough apart to allow the excess of mixture to drain out. In this class of wounds, I think the superiority of formaldehyde-glycerine over iodine, is pronounced. Iodine is very destructive to the synovial sheaths. Formaldehyde-glycerine seems to be absolutely harmless. Where the tendons are severed, they are united. Dry gauze with formaldehyde-glycerine is used on the skin.

GUN-SHOT WOUNDS INVOLVING BONES.

Gun-shot wounds involving bones are primarily injected with formaldehyde-glycerine. Subsequent injections depend on the asepticity of the wound. Where fragments of foreign material, such as clothing, remain concealed in the wound, it will be found necessary to inject daily, the tract of the missile. The mixture is extremely buoyant and carries loose foreign material out either exit or entrance wounds.

COMPOUND FRACTURES.

In my earlier experience these were injected daily, leaving the wound partially open. Recently I have treated two cases of compound, comminuted fracture by replacing all frag-

ments and filling the wound with formaldehyde-glycerine and suturing the skin wound, thus converting them into simple fractures. In the first case there was no infection and primary union of the skin took place. Union was delayed, but no longer than one would expect ordinarily from such a fracture. In the second case, primary union of the skin occurred; no infection took place. Union has not taken place in the radius after six weeks, although the ulna has united. It may be stated that an oblique fragment of the radius and without periosteum, one inch long, was not replaced owing to its severe contamination.

SCALP WOUNDS.

Scalp wounds do remarkably well bathed in formaldehyde-glycerine although iodine has always been a reliable antiseptic in these cases.

AMPUTATION STUMPS.

All amputation stumps are finally bathed in formaldehyde-glycerine. I may say that I am doing fewer amputations since relying on this mixture, and am saving more tissue. If necrosis of traumatized tissue occurs, it will be noticed that the necrotized tissue is an aseptic odorless dry slough.

In conclusion I wish to state that I always have on hand the iodine, the hypertonic salt solution, the peroxide for anaerobes and the formaldehyde-glycerine. If I were forced to retain only one of these, I should certainly retain the formaldehyde-glycerine, although I wish it to be understood that each of these agents has its place in the treatment of wounds.

Tetanus has been a stranger in my own cases although there were three cases of tetanus in the hospital last fall as a complication of gun-shot wounds, at the same time that I was treating fifteen cases of severe wounds of all varieties in the same institution.

I cannot close however without mentioning the one disadvantage of this treatment. The patient will often complain of the pain from the burning of the formaldehyde but this is not severe and does not last much longer than an hour. In an over sensitive patient I would use 1% mixture after the primary dressing.

Regarding the open treatment of infected wounds, I may say that this method could be used in conjunction with the formaldehyde-

glycerine better than with any other preliminary antiseptic treatment. In fact my surface dressings are so light as to allow the wound to be quite accessible to the air and at the same time the evolved instinct of the patient to cover up a wound, is not combated.

August 6, 1918. P. S. The compound fracture, referred to above, united solidly. Since then all my compound fractures have done fully as well.

I wish to emphasize that in very dirty cases I have been doubly, and often trebly cautious and have not been satisfied to depend on one agent alone. One of my favorite cleansing agents has long been ether, and I have recently

noticed in the Red Cross Bulletin, issued to the Army Surgical Service in France, that this agent stands on a basis practically equal with Dakin's solution in the preliminary cleansing of wounds. The only objection to its use is its high cost. Again I must confess that I have been guilty of the extensive use of salt solution, both normal and hypertonic.

As I stated before in my paper of June, 1915, each of these agents has its place. Summarizing, I might say that the main indication for the use of formaldehyde-glycerine is in the treatment of infected joints, bursae, wounds in which the tendons are exposed, and in compound fractures, especially of the gun-shot variety.

The Cause of Hay-Fever.—In the regions of the United States west of the Rocky Mountains, hay-fever may be produced by an almost entirely different flora from that which causes it in the eastern states and in Europe. This emphasized the need for determining the exact species involved, in each case before treatment for immunity may be undertaken. It has been found that the type of spring hay-fever which is very troublesome in the Sacramento Valley is attributable to a walnut tree pollen (*Jour. A.M.A.*, August 10, 1918, p. 469).

Eckman's Calcerbs.—This is put out by the same concern that exploits Eckman's Alternative, essentially a mixture of alcohol, calcium chlorid and cloves. Calcerbs is not sold openly as a cure for consumption, yet as an appeal to the consumptive the claims made are probably just as alluring and as dangerous as those made in the past for the "Alternative." The A. M. A. Chemical Laboratory reports that Calcerbs is sold in the form of tablets and that these contain about 20 per cent. calcium chlorid. They also contain calcium carbonate, an emodin-bearing laxative drug, such as aloes, sugar and flavoring material. That some physicians have recommended calcium salts in pulmonary tuberculosis, based on the unproved supposition that consumption is due to lime deficiency, is no excuse for a "patent medicine" concern putting out calcium chlorid under thinly veiled claims that will lead the public to infer that the preparations will cure consumption (*Jour. A.M.A.*, August 10, 1918, p. 488).

Katharmon.—The Council on Pharmacy and Chemistry reports that the Katharmon Chemical Company in advertising its "Katharmon" appeals especially to a profession whose members, if they live up to their ethical code, would not prescribe

it. A comparison of the so-called formulas published for Katharmon in the past shows that they have not only varied from time to time but that in no instance was a quantitative statement with regard to all the asserted ingredients given. The A. M. A. Chemical Laboratory reports that Katharmon has an alkaline reaction and therefore cannot contain boric acid, salicylic acid, or "borosalicylic acid," as has been claimed. Katharmon is in conflict with Rules 1 and 4 of the Council on Pharmacy and Chemistry because of its indefinite and secret composition and the method of advertising it indirectly to the public; it is in conflict with Rules 10, 6 and 8 in that it is an irrational shotgun mixture sold under unwarranted therapeutic claims and under a name nondescriptive of its composition (*Jour. A.M.A.*, August 10, 1918, p. 487).

Mail Order Frauds.—A fraud order was issued against the following four concerns after an investigation into the character of their business by the post office authorities: Mrs. A. H. Hon, South Bend, Indiana, advertising and selling various alleged remedies for the self-treatment of ailments peculiar to women. The Publishers Advertising Agency Inc., operated by Clarence E. Worthen, Boston, Mass., for the purpose of securing space in newspapers for the advertisement of a large number of proprietary articles sold through drug-stores. L. A. Johnson, an ignorant negro, Lake Village, Ark., operating under the names Dr. George D. Williams, Dr. L. A. Johnson, and The Associated Doctors, and offering to cure "anything you were not born with." Last Chance Medicine Co., conducted by a negro, C. Frank Jones, at Birmingham, Ala. (*Jour. A.M.A.*, August 17, 1918, p. 590).

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

A. L. Seeley, ChairmanMayville
 E. W. TolesLansing
 R. S. BucklandBaraga

Editor and Business Manager
 FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
 On Leave of Absence on Duty
 Medical Reserve Corps, U. S. A.
 GERRIT J. WARNSHUIS, M.D.
 Acting Representative Publication Committee.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Gerrit J. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

Entered at Grand Rapids, Michigan, Postoffice as second class matter.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 26, 1918.

October

Editorials

ARE WE LEADERS OR FOLLOWERS?

We were very much interested in an article that appeared recently in the Medical Review of Reviews written by the famous explorer, Stefannson. The paper did not attract our attention so much because of the author's opinions on the subject of scurvy which have been completely vindicated by the modern investigations of vitamins, but some of the criticisms that he makes of doctors in general contain a good deal of matter for sober reflection. According to his views, the profession is so taken up with the endeavor to verify old superstitions and popular fancies that it becomes unduly prejudiced and often fails to see the truth that is quite evident to the lay observer. For example, he refers to the old theory regarding the etiology of scurvy which grew out of the supposition of a naval officer many years ago that scurvy was due to a lack of variety in the diet. This hypothesis has been religiously followed wherever it was left to medical men to direct the fitting out of an exploring expedition. His own observations, however, in comparing men who followed his orders to maintain a supply of

fresh meat and a minimum of salt with those who had an abundant variety lead him to believe that there was nothing in the theory. Modern research has entirely vindicated him. Such an example of a whole profession being duped by a casual, unfounded notion is not edifying to say the least.

To go still farther, he refers to the profession's unqualified endorsement of the dictum, "Bathing for health's sake" and he is quite right when he says he has seen any number of persons go six months without a bath without ill results and so far as its effect on the bodily functions go, bathing might well be dispensed with. It is more a matter of esthetics and taste rather than hygiene. Any one who has had occasion to examine those from a class where modern plumbing and hot water are still a great deal of a luxury will quite agree with him.

A little reflection will show us that Mr. Stefannson's criticism can be applied in a good many more instances. One may travel over wide areas of our country and in almost every region the natives will tell you that that particular section is the worse climate there is for catarrh. The doctors take them up and when a patient comes in with a nasal catarrh instead of correcting defects in drainage or improving the general resistance he is advised to seek a change of climate. If a man is suffering from a malady and he goes on a journey and comes back well, it was the change of climate that did it. The public swallows it, it is an easy explanation, involves no explanation of experimental evidence nor homely illustrations, and the doctor hurries on to the next patient. In the popular mind, change of climate is the one life saving measure in the treatment of tuberculosis and yet our best authorities on that disease rank it last in importance and we dare say that to them the psychic effect of such a change, the detachment from harassing surroundings, the element of novelty, etc., has a good deal more weight than any mysterious quality of the atmosphere may have.

Consider all the nonsense that has been talked about mental fatigue and the innumerable diversions and amusements that have been devised for the tired business man. Why not tell your business man the truth? That it isn't his mental exertions that have produced that tired and dull feeling but his sedentary inactivity that is softening his muscles and slowing his circulation. If he lies awake nights

worrying about his affairs it isn't because his brain is tired but because he has been laboring under an illusion that the human anatomy was a lump of gray matter mounted on a back-bone and a few other useless appendages.

People like to talk about high-strung temperaments, delicate constitutions, sensitive dispositions and the medical profession take them up and cajole them with the term neurasthenia. It is owing largely to what the National Army Training Camps have shown they could do with our "neurasthenics" that we are learning to drop this camouflaging word.

Turning to the matter of drugs we find by all reports that the traffic in cough syrups and spring tonics continues to thrive not because physicians recognize such nostrums as scientific therapeutic agents but because the public demands them. Liver disorders have been a most fertile libel for quackery and medicine vendors.

It should not be presumed that the profession's acquiescence to such popular notions and opinions, such as we have mentioned above, is due to ignorance or lack of judgment. This may be true in some instances among those who are content to work by rule of thumb methods and fail to keep informed on scientific progress but in the large majority of cases it is pure indifference. Too many of us look upon the practice of medicine solely as an art. We are paid to cure or relieve the patient according to the best and most enlightened methods at our avail and that is sufficient. Our duty is done.

However, it must not be forgotten that in order to exercise our art to its best advantage, in order to handle a case properly, it is always necessary to overcome certain prejudices in the patient's mind, to make him believe that your methods are superior to some preconceived ideas he may have. It may be hard to convince a patient that cold air is beneficial in pneumonia but it is doubly hard if another doctor has previously submitted to his wishes simply to save argument. A few days ago we had the pleasure of arguing with a man who wanted to soak an infected wound in a carbolic acid solution. It was not the worse thing he could have done and in fact it has often proven a satisfactory treatment. We might have allowed him to do as he wished and even if the results were bad, he would not have thought of blaming us. The temptation is obvious. It is equally unfair to insist that a patient follow a method without giving him some reason for

adopting it in preference to his own. It was hard to explain to the man why other antiseptics were better than carbolic acid, to make him understand that a doctor's opinions are based on a large number of experiences and not on isolated instances. It took a lot of time and talking but who shall say that it was not worth while? It is only by multiplying innumerable instances of this sort that the respect for the learning of the medical profession is developed and an intelligent understanding is gained by the laity of medical practices.

It is our privilege to teach as well as to heal. The public will not desire the most advanced methods unless they are taught the superior merit of them. The relative merit can not always be judged by results. Cases often get well in spite of treatment as for example the rheumatism and other transient symptoms that are "cured" by chiropractic. Quackery abounds with testimonials of cures. Who hasn't heard of the cases of sore throat that were cured by taking kerosene? The public's opinion of our treatment will depend as much upon our ability to prove its reasonableness as it does upon the results that it obtains. Likewise in matters of hygiene we will retain much more prestige if we refrain from recommending fads in clothing, food, etc., that are not thoroughly established by scientific evidence.

THE PHYSICIAN AND THE FOURTH LIBERTY LOAN.

"Every professional man has a direct personal interest in the defeat of Germany on the basic ground of Patriotism first and in defense of the priceless principle of intellectual liberty. America, France and Great Britain have afforded scientific men the utmost freedom of thought and perfect immunity from the interference of bureaucratic despots and the tyranny of a political program. The German system has produced many men with the titles "Doktor" and "Geheimrath" but let it not be overlooked that modern pathology dates from Claude Bernard and Louis Pasteur—both Frenchmen. Serum therapy relates not to a German but to Elie Metchnikoff, Roux and Behrends, pupils and inheritors of Bernard and Pasteur. Operative surgery unquestionably owes its present triumphant status more to the Americans than to all Germany and Austria combined.

"The handicaps of the German system of professional and scientific training are varied

and serious, and the worst of all is Tyranny. 'L'Etat c'est moi' is the classic formula for Kaiserism in its political aspect. Bad as that is it is nothing as an evil in comparison with 'La Science c'est moi'—'L'Art c'est moi'—'La Musique c'est moi'—and so on. That formula has brought ridicule on most of the modern German art including music and has put the state-academic yoke on more than one of the sciences, including medicine and surgery. Thus the scientific men of America, France and England have more than the universal popular patriotic impulsion to sacrifice, struggle and fight for the complete undoing of Germany and all that is implied in the state system which Germany represents at its worst.

"There is no occasion, therefore, to develop at greater length the proposition that every American physician has a great stake in the defeat of the Hohenzollern.

"This is the second week of the **FOURTH LIBERTY LOAN** campaign.

"In other words more than one-third of the time allotted for the floating of the great loan is gone and there is much yet to be accomplished.

"The **FOURTH LIBERTY LOAN** any way considered is the most important of all. It is the Fighting Loan. Others have been preparatory. This is the one that pulls the trigger and 'yanks the lanyards of the Yanks' big guns.'

"In the very nature of the case, the American physician is pre-eminently qualified to be a master force in the sweeping success of the Loan. In what way? Let's examine the matter.

" 'Suggestive therapy' is admitted to be an important organ in the equipment of the general practitioner. Even the specialist—yes, even the Surgeon, has found that a large part of his professional success relates to his command of the 'psychologic suggestion' that may affect or govern metabolic and pathologic processes in the body. General observation of 'practitioner technique' in hundreds of clinical and consultation cases has convinced the writer that 'suggestion' aids the *Materia Medica* in the physician's success in a large proportion of the ordinary cases he is called to attend.

"This admitted, everything is admitted regarding the potency of the family doctor everywhere, as a Liberty Loan worker. Already a master of the arts of 'suggestion' he has but to apply his ordinary professional methods for the cure of a malady which is more or less general

in America—Liberty Loan atonicity. There are many million cases of this disease, to judge by the Treasury reports on the Third Loan results. These cases (though not fatal to the patients themselves) might prove to be all but fatal to the United States Government, if the Credit of the nation were impaired in the eyes of the enemy by a failure to over-subscribe the Fourth Liberty Loan very generously. The reasoning involved is this: Credit is the basis of war and any sign of declining credit is pounced on by the enemy as a system of weakness behind the lines, which will appear soon in weakness on the firing line.

"Therefore, Gentlemen of the Medical Profession, if you value scientific liberty and the untrammelled advancement of your science, express your convictions and exert your personal and professional influence in your community, for the promotion of interest in the **FOURTH LIBERTY LOAN**.

"A friendly word from the Family Physician—a confidential word if you please—may be of inestimable value to the Government in effecting an undreamed of success in the floating of this Fighting Loan.

"Be on the lookout for the new disease—Liberty Bond atonicity.

"And when you see a case of it, apply the remedy;

"**SUGGESTION:** To buy one or many Fourth Liberty Bonds."

DEVELOPMENTS OF SURGERY OF THE SPINAL COLUMN.

Of late years the attention of the surgical world has turned with renewed interest to the pathological conditions of the spinal cord which may be relieved by surgical means. This awakened interest may be attributed largely to improved methods of diagnosis such as lumbar puncture and better X-ray methods, and in the second place to the invention of new instruments, such as the motor driven saw.

The operations on the spinal cord at present are confined to practically two types; namely Albee Fixation of the spinal processes and Laminectomy. It is particularly the operation of Laminectomy to which we desire to call attention. While the variety of lesions to which this surgical remedy may be applied is not very wide, nevertheless very wonderful results have frequently been obtained in cases that until a few years ago would have been considered hope-

less. Such pathology as has been attacked includes benign tumors, sclerotic adhesions of the cord and its membranes and traumatic lesions in which cord pressure is produced by fractured fragments of bone or the hematoma.

In a recent article by Elsberg entitled "Observations of 150 Laminectomies" the following notes on the symptoms of spinal cord tumors and indications for operation are of interest. As a distinction between intra and extra-medullary tumors he points out that the root pains in extra-medullary tumors usually are absent until very late. On the other hand the pain occurs early in intra-medullary tumors. It may even happen that there are no sensory systems at all in posterior extra-medullary tumors until very late. A case presenting a large encircling type of extra-medullary glioma of the cervical cord illustrates this point. Symptoms began with spasticity of lower limbs with increasing weakness of the arms and legs, no change in the tactile, thermic, nor pain sensations until the motor symptoms were well advanced. Just a day or two prior to the operation the patient felt sharp pains in the back behind one of the shoulders which were relieved by operation.

In this article he cites several cases to show the order in which different areas are affected. Sensation is affected first on the anterior surface of the body but the posterior surface is always affected before complete anaesthesia sets in on the anterior surface. Aside from these points regarding sensory symptoms there is a rather peculiar condition recorded in which a marked motor disturbance frequently occurs opposite to the side of the cord on which the tumor is located.

The question of when to operate and when to treat a case expectantly in fresh injuries is often a difficult one to decide. Most authors agree that one must be guided more by symptoms than by X-ray findings. The location of the injury is sometimes a determining factor. Horsley is responsible for the opinion that he expressed in somewhat this fashion, "If the lesion is acute and in the cervical region, then certainly wait. As regards the dorsal region, better to wait a little. As regards the lumbar region, I do not think you want to wait to operate."

X-rays taken of the fractures of the cervical vertebra often give no indication of the severity of the damage done to the cord. This is due to the fact that there is frequently a reposition of the parts either spontaneous or

due to manipulation. On the other hand, there may be a considerable displacement of the fragments without much destruction of the cord especially in fractures of the first and second vertebrae. It is a remarkable fact that the fracture of the vertebrae is seldom accompanied by shock unless it is complicated by fracture of the base of the skull. As a further argument in favor of the conservative treatment of cervical cord injuries, it may be added that cases have been reported showing very severe primary symptoms with complete paralysis of the lower extremities, priapism, and fecal incontinence which, however, have recovered.

Neuhoff has summarized the points in favor of delaying operation under nine heads. The most important of these are:

1. Compression from fracture is often only temporary as the bone may spring back in place.
2. Supporting fragments of bone may be removed by operation.
3. Muscular support is diminished by operative measures.
4. The danger of the fragments slipping during the operation or in preparation for it.
5. After effects of the operation such as shock, hemorrhage, etc., must be kept in mind.

He gives two positive indications for immediate operation. The first is progressive hemorrhage as indicated by repeated lumbar puncture. Secondly, if the evidence of pressure as indicated either by X-ray or neurological symptoms shows that the condition is severe enough to result in permanent injury.

Where paralysis is immediately coincident with the injury it may be justly assumed that it is due directly to cord laceration and not to pressure from hemorrhage, edema, or bone displacement. In such cases, little can be gained by operation. Care must be taken to locate the site of the cord lesion as Taylor has some time ago pointed out that lesions may occur at a point considerably remote from the level of the fracture.

There is a consensus of opinion that priapism must always be taken as an ominous sign as regards the prognosis. It must, also, be borne in mind when considering the outcome of these injuries that after recovery from the primary effects occurs, there frequently follows a secondary condition known as Kummel's disease. This may set in after a long or short interval and is characterized by kyphosis and the re-appearance of symptoms of cord compression. Thus far, 100 cases have been reported.

Other late effects may be due to post traumatic sclerosis and dural adhesions.

In concluding this resume, we would like to call attention to a fact of great interest to the general public. We have always looked upon chiropractory and osteopathy as practices which while of no direct benefit certainly were not in themselves dangerous procedures. The investigations of Stern have revealed three cases of fractured vertebrae due to the violent manipulation in these forms of treatment. This is only one more reason why the charlatans who exploit the credulity and ignorance of people in this fashion should be suppressed.

Editorial Comments

FOURTH LIBERTY LOAN SLOGANS.

Bonds Buy Food For Soldiers. Buy Liberty Bonds.

Money Means Munitions. Buy Liberty Bonds.

Bonds Build Tanks. Buy Liberty Bonds.

Bonds Build Airplanes. Buy Liberty Bonds.

Bonds Build Ships. Buy Liberty Bonds.

Liberty Bond or Liberty Bound, which will you have it?

Buy Bonds and Back the Guns that Hit the Huns.

Bonds Put the Dam in Potsdam.

Bar Barbarism by Buying Bonds.

The More Bonds the Fewer Casualties.

Save for Your Country or Slave for the Hun.

At a meeting of The American Council of National Defense, Col. Lane of the British Medical Mission to the United States expressed himself as follows:

Colonel Lane told of the enormous help given by American surgeons who came over long before America's entry into the war, saying that he had been asked to speak about the difficulty of getting medical men for the military service. He said: "The difficulty with us has been to keep them out. I do not suppose you are any different from our men. I have always understood that the medical people in America were the keenest people in the world. Our people have gone without a word. They gave up their practices, their futures, their wives and their children. They did not ask: 'How much are we going to be paid?' or 'What is going to become of our families?' they came at once to the aid of their country. I do not think you will have to ask the medical men to come. I think the difficulty, my friends, will be keeping them away."

The taking over of our medical schools by the U. S. Government will prove to be a wonderful opportunity to the young men who are now studying medicine or who contemplate entering it. Not only will it make it possible for every man of ability whether he has the means or not to learn the profession without any expense to himself but it will bring to him the strengthening of character and physique that the army discipline inculcates. There will be no opportunity for the student to drag through his course from one condition to another and, by the aid of ponies and such, edge himself into a career in which he has no place. He will not have to wait for his final proving in the ranks of competition at the hazard of other lives and well-being, and, failing, turn to abortions and the many forms of charlatanism. The idler and incompetent will find it a short shift from the medical school to the training camp. It would perhaps be too idealistic to look for some such system to be applied to civil life in the future but we can not refrain from speculating on what a blessing it would be.

Significant of the awakening interest that the public is taking in the control of venereal diseases, is the fact that New York State during the month of August held civil service examinations for the appointment of five high salaried officials in this department of public health.

It may be somewhat early for a detailed comment, nevertheless we desire to advance the suggestion that some thought and discussion be devoted to the requirement of certain of our medical officers who are serving in purely administrative capacities. They are being temporarily divorced from the practice of medicine and have no opportunity of remaining abreast with scientific progress. Before they again return to civil practice opportunity for a post-graduate course should be provided for them. Those who are affiliated with educational institutions may well commence the consideration of a solution of the problem.

The call for martyrs in the cause of science has never gone unheeded. There never seems to be a lack of men who will give themselves to the fascination of unsolved riddles that leads some adventurous souls into the frost of polar regions, others on plague commissions into deadly infested regions, and a few like Hunter it lures into experimenting on their own bodies. The most unique instance of this kind that has come to our notice is that of a patriotic citizen who has offered himself to the entomologists at Washington as a host for "cooties." In addition to this sacrifice he is making, this man has a son in the U. S. Expeditionary Force in France.

To settle any difficulty that may be in the minds of those who fear they might be lending aid to the enemy by dealing with firms of German origin, we would like to call attention to the advertisement of the Bayer Company in this issue.

Recently, there has been a revival of interest in the use of baker's yeast for the treatment of constipation. Good reports have also come regarding its effect on obstinate cases of acne vulgaris. Whether the results are due in these cases to its laxative action is rather difficult to determine as according to Balkley and Strickler constipation exists in from 35 to 45 per cent. of cases.

From one to three cakes of yeast are given daily.

The demonstration that epidemic meningitis is primarily a blood infection makes it increasingly imperative that we thoroughly acquaint ourselves with the prodromal symptoms of the disease. Herrick by using the intra-venous injections of the serum in place of the intraspinal succeeded in reducing the mortality from 34.3% to 14.8%.

HEALTH INSTRUCTIONS THROUGH DRAFT BOARDS.

Washington, D. C., Sept. 23—Provost Marshal General Crowder today called attention to a circular of instructions prepared by the United States Public Health Service for registrants declined in the draft because of physical disability. The circular, copies of which have been placed in all the local draft boards throughout the country, is the result of a recommendation made to General Crowder by Surgeon General Rupert Blue of the U. S. Public Health Service. The Surgeon General points out that in the first draft about one-third of the men examined were rejected for physical disabilities and that hundreds of thousands will be added as a result of the examinations to be made of the new registrants.

"It is highly desirable," said Surgeon General Blue, "that the men found to be disqualified for military service by the examining physicians of the local draft boards should receive definite instructions as to the meaning of their disabilities and that a strong appeal be made to them to correct these disabilities as far as possible. But the object of this measure is not only to reclaim men for military service or for such service as they can perform, but to lessen the burden of illness and disability among those engaged in essential industrial work. It is hoped that the instruction in this circular, which is really a primer of the physical defects of the nation, will reach far beyond the draft board and be utilized by all agencies interested in improving the public health to instruct the people with regard to their physical deficiencies

and the ways and means by which they can be remedied."

According to the U. S. Public Health Service experience everywhere shows that the proportion of persons with physical impairments is considerably greater in persons between 30 and 40 than in those between 20 and 30 years of age. This waning vitality at ages over 30, so commonly accepted as inevitable, can be postponed to a large extent. In this connection, it is pointed out that 60 per cent. of the physical defects found in the last draft were of a preventable or curable nature.

In addition to furnishing all the local draft boards throughout the country with a sufficient number of the circulars to supply one to each registrant rejected because of physical disability, arrangements have been made to furnish specimens of the circular to life insurance companies, fraternal organizations, labor unions, employers of labor and others who desire to reprint the circular in its present official form for wider distribution.

"The U. S. Public Health Service will be glad to furnish specimens of this circular on application and urges all organizations that can reach large groups of people to reprint and distribute the circular and thus contribute materially to the public welfare and the national defense."

The circular issued by the U. S. Public Health Service is entitled "Information for Guidance and Assistance of Registrants Disqualified for Active Military Service Because of Physical Defects." It is a four-page leaflet, containing specific information relating to the commoner causes of rejection or deferred classification, e. g. Defective Eyesight, Teeth and Disease, Feet, Underweight, Overweight, Hernia, Hemorrhoids, Varicocele, Varicose Veins, Bladder, Kidney and Urinary Disorders, Ear Trouble, Heart Affections, High Blood Pressure, Lung Trouble, Rheumatism, Venereal Disease, Alcohol, Nervous and Mental Disease, and Miscellaneous Conditions. The information is presented in simple form and has been approved by the highest medical authorities. At the end is a striking quotation from President Wilson, "It is not an Army we must shape and train for war; it is a Nation." This is followed by the following personal appeals:

"Do not go through life with handicaps that may be easily removed. Do not shorten your life, reduce your earning capacity and capacity for enjoying life, by neglecting your bodily condition."

"While other men are cheerfully facing death for the cause of democracy, do not shrink from facing a little trouble and expense to make yourself strong, healthy and fit."

Over a million copies of the leaflet have been sent out to the draft boards. Requests for specimen copies should be addressed to the U. S. Public Health Service, Washington, D. C.

Correspondence

From: Lieut. Colonel F. F. Simpson, M.C., N.A., Chief of Section of Medical Industry.

To: The Doctors and Dentists of the Country.

Subject: Utilization of Platinum in Unused Instruments.

1. In view of the limited supply of platinum in the country and of the urgent demand for war purposes, it is requested that every doctor and dentist in the country go carefully over his instruments and pick out EVERY SCRAP OF PLATINUM that is not absolutely essential to his work. These scraps, however small and in whatever condition, should reach Governmental sources without delay, through one of two channels:

(a) They can be given to proper accredited representatives of the Red Cross who will shortly make a canvas for that purpose.

(b) They may be sold to the Government through any bank under the supervision of the Federal Reserve Board. Such banks will receive and pay current prices for platinum.

By giving this immediate attention you will definitely aid in the war program.

2. It is recognized that certain dental and surgical instruments requiring platinum are necessary, and from time to time platinum is released for that purpose. It is hoped, however, that every physician and every dentist will use substitutes for platinum for such purposes wherever possible.

3. YOU ARE WARNED against giving your scrap platinum to anyone who calls at your office without full assurance that that individual is authorized to represent the Red Cross in the matter.

F. F. Simpson,

Lieut. Col. F. F. Simpson, M.C., N.A.,
Chief of Section of Medical Industry.

LETTERS FROM OUR BOYS.

Chief Consultant Lieut. Colonel, M.C. N.A.
Headquarters, Base Hospital No. 36, A. E. F.,
A. P. O. 732, August 1, 1918.

Dr. J. H. Carstens,
David Whitney Building,
Detroit, Michigan, U. S. A.

August 1, 1918.

My Dear Doctor:

Your kind letter informing me of the progress of the Detroit College of Medicine is at hand. I am

indeed glad to hear of the prosperity and energy of the college and I most heartily approve of your action in hurrying our graduates to the front. Wish you could visit us at our hard working center. At the present writing the Detroit College of Medicine unit has more patients than any other base hospital in France, to the best of my knowledge. We have far exceeded our bed capacity, which, as you know, was 2,000, and this center at the present time is caring for nearly one-third of all the wounded in the recent battles. We have two teams of six surgeons each at the front, doing strenuous work at evacuation hospitals.

Many of our Detroit graduates over here have called upon us. We have received the most complimentary report from our Chief Surgeon, General Ireland, since a recent inspection of this plant. We are doing an enormous amount of surgery, and it is exceedingly satisfactory to feel that our mission over here is timely and full of service. I had the pleasure of eating lunch with your son, Henry, who seems to enjoy his hospital work immensely. I had the pleasure of meeting one of his patients, Archie Roosevelt, a few weeks ago.

The Christmas presents sent by the Wayne County Medical Society to me personally to be distributed to our officers, arrived a few days ago at Dijon. Our plum puddings and all the various tidbits enclosed were eaten up and disposed of by some one at that place who may not have noticed how the parcels were addressed. I would suggest that if it takes six months for a Christmas box to reach us, it would be wise to send it early and make sure that it is addressed to the Detroit College of Medicine and Surgery Unit, No. 36, Army Post Office 732, American Expeditionary Forces, so that any eating or smoking may be done by us individually, rather than by proxy.

We are working night and day and enjoy our service immensely. We often think of you at home and wish that we might be transported there for a few days' rest. Hoping this finds you well, and with kindest regards to all, I am,

Very sincerely yours,

Burt R. Shurly,
Lieut.-Col. M. C.

July 21, 1918.

Here I am back again at the little hospital. It is crammed. We've lost almost 90 per cent. of our regiment. Most all my friends are killed or wounded; but it was a magnificent attack. Have small wound in right forearm, so am trying to write with left hand. Everything bully.

Walter W. Manton, M. R. C.
Captain, 26th Infantry, 1st Division.

From the American Red Cross Military Hospital No. 3, Captain H. R. Carstens, wrote to his father: "Mrs. Whitelaw Reid is back in town again, so, of course, she is out here a great deal inspecting and setting it right. I told you in one of my previous letters that Walter Manton came back to us with a wound and fracture of the radius of the right arm. Col. Lloyd did a beautiful operation, prompt-

ly healed, (that is the wound), and the bone is in splendid position. Managed to get down to the club (that is the Cercle Volney) last night. Dr. Jacob Gould Shurman, President of Cornell, was the speaker. Had several visitors this week. Walter Vaughan was in for a brief visit, he is now consulting surgeon of the 32nd Division. The Division Surgeon, Lt. Col. Seaman of Milwaukee, (Graduate of the Detroit Medical College) came with him, and sends best regards of course. Yesterday, who do you suppose should appear but Capt. Kidner. He is just over for an inspection tour, and is going right back to London to be in charge of the American Orthopedic Service in England. He had lunch with us. Friday, Col. Lloyd and I went down to see Mr. Stettinius, (Second Assistant Secretary of War), about a sick officer of his party. Nearly forgot to mention that General Pershing visited the hospital a couple of weeks ago."

Somewhere in France, August 4.

* * * I am writing in my dugout where the light is very poor, and for a table, my faithful right knee. Three months I spent in England, in various hospitals, where excellent courses were given. (I am with a British unit, you know.) About the 1st of July I was sent to France, and immediately down the line, where I am at present located. I have been on two different sectors. The first was in front of the Canadian Hospital that was bombed by the Boche. Believe me, it was a shame, what they did to that place. Several doctors and nurses were killed, as well as some fifty patients. Last week our unit got orders very suddenly to move. I was put on the back of a horse (a pity that he could not get there himself, Ed.) and had a most wonderful trip through a very beautiful section of France. I rode for two days, God only knows where, I just followed the crowd. At last we reached our destination, for which I was very thankful, as long and intimate contact with that horse was becoming irritable and I was forced to take my meals served on a shelf for a few days.

My present station seems to be very well known to "old Jerry" because he has visited us many times, and as a welcome introduction on my first night, he entertained us with six bombs and a few shells, but I was so tired and worn out that he could have blown the place to pieces, and yet I would have been able to sleep.

The British officers I am with are very fine fellows and have taken particular pains to explain to me all of "old Jerry's" tricks, so that I might have at least an even chance with them. They take great pleasure in Yankee expressions, and you would die with laughter to hear them trying to repeat some of them. There was a small card for

us to fill out stating the number of languages we could speak, and the British officers declared that they were going to write down that they could speak the American language.

I attended a little sport gathering two weeks ago, some five miles back of the line, and had just got off my horse, when much to my surprise someone yelled out "There's Dibble," and Tom Marsden came running up to ask what in — I was doing there. So we had a very fine time for a couple of hours. * * *

Henry F. Dibble, M. R. C.,
1st Lieut., care of Amer. Express Co., 6
Haymarket, London, S. W., England.

(Courtesy, of Dr. H. W. Hewitt.)

July 22, 1918.

* * * I have been ordered to an infantry regiment, as Regimental Surgeon. I have ten medical officers and three dentists as assistants. I don't think there is a place in our sector I haven't been into, looking into and after things, including Boche trenches. I am now in the lines visiting the Post de Secours, as I have an M. D. in each one. I wish you could step into my dugout tonight for a smoke, for it is a right cozy place, practically shell proof, except for a direct hit, and that chance we must take. I have two rooms, one used as a lounging and smoking room, and the other as a bedroom. There is a table, chairs, electric light and all the comforts of home—more than that, one is rocked to sleep by the roar of the big guns, and awakened by the same sound in the morning, with a tattoo from the machine guns. It's a wonderful life, full of chance and risk, but all a part of the game. After your initial baptism of fire, you get on and don't notice the noise.

I have a little hospital of 35 beds, in the cellar of an old house, and have as much work to do as I can take care of. By the way, I met Shawan the other day, looking fine. He is in an excavation hospital and very busy too. I saw quite an interesting battle in the clouds yesterday between a French plane and a Boche, the latter turning tail and fleeing after about 15 minutes of it. Do you know, I really believe the Boche are beaten but either don't know it or won't admit it.

* * * Sometimes wonder if we are passing into a second childhood, we laugh at such foolish things, but after six weeks in the trenches you can laugh at anything.

R. H. Bookmyer, M. R. C.,
Captain, 11th Infantry, A. E. F.

Dr. Harold Wilson,
David Whitney Bldg.

My Dear Sir:

This is a great life. Nothing to do from 10 p. m. to 6 a. m., other hours very busy. I am ward surgeon and have two assistants. One was professor of Obstetrics in Pennsylvania for 30 years, the other a surgeon of 35 years experience who witnessed the first operation performed by Lister in New York. Under the regulations of U. S. A. they salute me whenever I come into the ward. Some life. The first few days I was out here I saluted everything, from privates, colored and white and even saluted myself in shaving mirror. My arm had St. Vitus dance. Now I can tell the Col. from corporal that's about all. Major Fred Newberry is here. C. O. of Base Hospital No. 100 which is being organized here. Please send my Bulletin here. Regards to all the boys.

Yours truly,

C. D. Brooks,
Major M. C. Base Hospital,
Camp Custer.

(Courtesy of Dr. H. W. Hewitt.)

July 22, 1918.

* * * I am back in the zone of advance again, so that I can not mention my station. However, I am still with the Mass. General. I came here to join the 331st Field Hospital, which is very shortly to go to Italy. It is only a temporary affair, to cheer up the Italians, but the old hospital is well equipped with good operating facilities and X-ray, and is or will be the only American hospital in Italy. We really expect to do a lot of work. It is a combination of a field and evacuation hospital. I am billeted with a French family, and they are certainly about the finest people on earth, and will do anything to make us comfortable. I had dinner with the family today. Everything is perfectly clean, and never will they eat different foods from the same plate. But the manure pile is only 15 feet from the table and chickens run around in the kitchen.

Lots of American soldiers are here and they all look very fine. Big heavy cheeks and all that, and no one seems to be worried. On the way up I met many hospital trains, both French and American. Some of the boys had been over here only since May and were already going back wounded. They all seemed to be full of joy, however, especially those that were able to stand or sit. * * *

Paul H. Lippold, M. R. C.
1st Lieut., Amer. Base Hospital, No. 6,
A. P. O. No. 705, A. E. F.

U. S. A. P. O. 721 France, July 26, 1918.

Dear Wayne Co. Medical Society:

On my return from service at the Chateau Thierry front during the epoch-making battle of July 15th-25th, I was agreeably surprised and delighted by a Merry Xmas Box from you. The delightful novelty of a Christmas greeting in July made the box all the more welcome. It was fine of you to remember us boys at the other side of the world, and I for one am deeply appreciative of the thoughts and labor represented by your gift. We of Unit 17, while not all glorified by newspaper prominence are working hard and making a record not excelled by any hospital unit in France. Everybody is doing his best and the Wayne Co. Medical Society is well represented, not only in the two Detroit Base Hospitals, but by many of its members working in other organizations. Those who are in the Reserve Corps are proud of their service. We will welcome many others of membership who are still waiting duty's call.

Louis J. Hirschman.

July 28, 1918.

Dear Friends:

I have just received the fine Christmas Box which you so kindly sent me so long ago. Please accept my sincerest thanks. I assure you it was greatly appreciated. It contained many articles which I needed and which are impossible to obtain over here. Well the box arrived nearer next Christmas than last, nevertheless it was even more appreciated. As at this time most of our Christmas stock has been exhausted. Please again accept my sincerest thanks, not only for the gifts but for the kind thoughts they conveyed with them.

Very sincerely,

H. N. Torrey.

(Courtesy of Dr. C. M. Wheeler.)

* * * We have been placed here at a base hospital which when completed will be the largest American hospital center in this country. We are about the first on the ground and we have our hands full. Am running a ward and a half which amounts to eighty beds. They are what we term slightly wounded so you see we are kept busy all right. * * * The country is very beautiful although so far have seen very little of it since I arrived but have hopes.

Before this reaches you I may be with the Harper Unit. Heard that there is a request in to the office here transferring me to them. You know boy how I would like to be with the old bunch once again. The boys in this outfit are fine, every one

of them, but I would like it much better to be with my old friends.

It is great to hear the boys talk of their fighting. They certainly gave them all they wanted on the Chateau Thierry front. They tell me that Huns are now using women in their lines, operating machine guns. One of the boys in this ward shot one himself.

It seems that all machine gun fighters either in trees or on the ground are chained. On one occasion one of the boys said that a crowd of about twenty Huns turned on their own soldiers and fired on them.

Theo. H. Smith,
Lieut. M. C. U. S. Base Hosp. No. 67,
Am. E. F.

MOBILIZATION OF WOMEN PHYSICIANS FOR ANAESTHETIC SERVICE.

Every effort is being made to keep war surgery at top-notch efficiency and to provide every wounded American doughboy with safe, rapid and comfortable anaesthesia, both at the Front and in the Hospitals in Blighty.

In this connection the following telegram is self-explanatory:

(Copy)

Washington, D. C.,
September 18.

Dr. F. H. McMechan,
Avon Lake, Ohio.

Proceed at once to secure qualified women physician anaesthetists under 45 years of age, of mental poise; as well as young women graduates, who are competent for such service.

(Signed)

Dr. Franklin Martin (per)
Dr. Emma Wheat Gillmore,
Chairman Woman Physicians' Committee
Council National Defense—Medical Section.

Those women physicians who are qualified for anaesthetic service or who are competent to be intensively trained are requested, at once, to get in touch with

Dr. F. H. McMechan Sec'y,
Interstate Anaesthetists,
American Anaesthetists,
Avon Lake, Ohio.

Deaths

Dayton Parker, M.D., member of Wayne County Medical Society, Michigan Surgical and Pathological Society, and the Michigan

State Board of Charities, died suddenly at his home, August 19, 1918. Dr. Parker was a graduate of the University of Michigan, class of 1876, and a Civil War veteran.

A. R. Coon, M.D., DeWitt, Michigan, died August 22, 1918, after a brief illness. Dr. Coon was a graduate of University of Michigan in 1912 and at one time president of the Clinton County Medical Society.

State News Notes

FOR SALE: Static machine, 16 plate, fully equipped, A-1 working condition. Globe Multi-Nebulizer in glass top table, double cylinder pump and compressed air vibrator, perfect condition. Frank R. Starkey, M.D., 813 Kresge Bldg., Detroit.

ANNOUNCEMENT—Doctor George L. Bond wishes to announce that he has taken over the Grand Rapids Clinical Laboratory and will be located in Room 201-202 in the Metz Bldg.

WAR WORK FOR YOUNG WOMEN.

The Surgeon General's Office, War Department has issued an urgent call for young women to serve in reconstruction hospitals at home and abroad. The Normal School of Physical Education, Battle Creek, Michigan, which is affiliated with the Battle Creek Sanitarium, wishing to do its share toward winning the war, has inaugurated a course in physiotherapy, which meets the requirements of the War Department. Courses begin October 1st and February 1st. Length of course is four months. The curriculum consists of Anatomy, Physiology, Hygiene, Bandaging, Active and Passive Movements, Hydrotherapy, Massage, Electrotherapy, and Clinics.

The medical profession are asked to direct the attention of young women who are planning to engage in war work to this unusual opportunity.

Further information may be obtained from Frank J. Born, M.D., Director of the School.

To Physicians of America:

Surgeon General Gorgas has called for 1,000 graduate nurses a week—8,000 by October 1.

25,000 graduate nurses must be in war service by January 1—in the Army Nurse Corps, in the Navy Nurse Corps, in the U. S. Public Health Service in Red Cross war nursing.

This involves withdrawal of many nurses from

civilian practice and necessitates strict economy in the use of all who remain in the communities.

You can help get these nurses for our sick and wounded men by—

Bringing this need to the attention of nurses.

Relieving nurses where possible wholly or in part from office duty.

Seeing to it that nurses are employed only in cases requiring skilled attendance.

Insisting that nurses be released as soon as need for their professional service is ended.

Seeing that your patients use hospitals instead of monopolizing the entire time of a single nurse.

Encouraging people to employ public health nurses.

Instructing women in the care of the sick.

Inducing high school and college graduates to enter the Army School of Nursing or some other recognized training school for nurses.

Encouraging nurses to go to the front involves real personal sacrifice and added work on the part of the physicians whose duty it is to maintain the health of our civilian second line defense—

But the men who are fighting for their country in France need the nurses.

Department of Nursing

American Red Cross,
Washington, D. C.

The War Council of The National Red Cross has appropriated \$2,500,000 to the Anti-tuberculosis campaign of the National Tuberculosis Association. The latter organization agrees to do away with the selling of Xmas seals and to unite with the Red Cross in a membership campaign at that time.

Major Geo. E. McKean, commanding Harper Base Hospital Unit No. 17 will return home soon.

Lieutenant-Colonel Angus McLean will not return as was expected, but will remain abroad indefinitely.

The Detroit College of Medicine and Surgery will open October 1.

Dr. E. S. Browning of Grand Rapids has completed a course in Urology at the Post Graduate School of Chicago and will enter this department in the Medical Reserve Corps of the U. S. Army.

CANDIDATES LICENSED BY EXAMINATION, JUNE 27, 1918.

Michigan State Board of Registration in
Medicine, Detroit.

Anderson, Charles A., Ironwood, Mich. ... 86.6 %
Bacon, Donald K., Ann Arbor, Mich. 85.5 %
Baumgarten, Elden C., Richmond, Mich. .. 84.4 %

Bergstrom, Victor W., Bay City, Mich. .. 82.7 %
Boyd, Linn John, Lansing, Mich. 83.2 %
Brainard, Clifford W., Battle Creek, Mich. 83.3 %
Brown, Robert E., Ann Arbor, Mich. 82. %
Burnell, Max R., Flint, Mich. 86.9 %
Busman, George J., Coopersville, Mich. .. 87.2 %
Cady, Frederick J., Mason, Mich. 85.6 %
Connell, John T., Ann Arbor, Mich. 84.1 %
Coons, John David, Ann Arbor, Mich. 89.3 %
Dance, Clifton L., Detroit, Mich. 80.9 %
Darnall, Joseph R., Ann Arbor, Mich. 86.8 %
Dixon, Ray S., Detroit, Mich. 79.95%
Emery, Clayton S., Ann Arbor, Mich. 89.1 %
Erickson, Arvid W., Ironwood, Mich. 87.9 %
Fellows, Bert, Ann Arbor, Mich. 79.8 %
Ferris, Ralph G., Detroit, Mich. 81.25%
Foss, John F., Ann Arbor, Mich. 83.1 %
Frackelton, Ralph G., Ann Arbor, Mich. .. 83.9 %
Gage, Helen L. B., Wixom, Mich. 86.5 %
Gordon, Richard E., New York, N. Y. 86.1 %
Greenfield, William J., Ann Arbor, Mich. .. 81.7 %
Greenthal, Roy Mark, Detroit, Mich. 89. %
Grice, Lewis Wm, St. Clair, Mich. 87.5 %
Grieve, Glenn, Ann Arbor, Mich. 81.3 %
Haag, Merit D., Ann Arbor, Mich. 88.3 %
Hall, Robert J., Detroit, Mich. 84.1 %
Harvey, Campbell, Detroit, Mich. 85.4 %
Hasley, Clyde Knapp, Monroe, Mich. 85. %
Heath, Parker, Ann Arbor, Mich. 81.2 %
Herrmann, George R., Ann Arbor, Mich. .. 88.8 %
Hoag, Lynn Arthur, Ann Arbor, Mich. 86.8 %
Hurth, Mathias S., Ann Arbor, Mich. 82.1 %
Hyde, Carroll C., Addison, Mich. 86.2 %
Johnson, Ammi Lloyd, Ann Arbor, Mich. .. 84.6 %
Judson, Herbert A., Ann Arbor, Mich. ... 85.1 %
Kempton, Rockwell M., North Adams, Mich. 87.4 %
Lundgren, Harry G., Ironwood, Mich. 85.7 %
McKinnon, William R., Ann Arbor, Mich. 85.5 %
Malfroid, Byron W., Houghton, Mich. 83.1 %
Marshall, Clement H., Ann Arbor, Mich. .. 85.3 %
Montgomery, John C., Detroit, Mich. 85.8 %
Morrill, Donald M., Big Rapids, Mich. 84.9 %
Morton, Moses E., Ann Arbor, Mich. 85. %
Norton, Arthur B., Detroit, Mich. 84.1 %
Pillsbury, Charles B., Ann Arbor, Mich. 82.2 %
Piper, Paul H., Alamo, Mich. 81.4 %
Prall, Harry J., Detroit, Mich. 81.9 %
Reynolds, Daniel I. C., Ann Arbor, Mich. .. 85.2 %
Robertson, Tom H., Ann Arbor, Mich. 86.3 %
Shearer, John P., Pontiac, Mich. 84.6 %
Smith, Edwin R., Richmond, Indiana 89.4 %
Smith, James M., Ann Arbor, Mich. 86.4 %
Spaulding, Harry B., Ann Arbor, Mich. .. 84.8 %
Stanton, James M., Ann Arbor, Mich. 85.5 %
Stebbins, Edward C., Ann Arbor, Mich. .. 89.2 %
Stein, James R., Detroit, Mich. 83.2 %

Stevenson, Jane D., Ann Arbor, Mich.	81.9 %	Voigt, Willy C. R., Ann Arbor, Mich.	89.3 %
Stowe, Washington P., Ann Arbor, Mich. ..	88. %	Vollertsen, Bernard H., Rochester, N. Y. ..	86.9 %
Strathearn, Hugh J., Jackson, Mich.	84.1 %	Wanstrom, Ruth C., Ann Arbor, Mich. ..	83.8 %
Tang, Chow Fung, Ann Arbor, Mich.	82.2 %	Watson, Robert W., Ludington, Mich.	83.1 %
Todd, Lester C., Ann Arbor, Mich.	85.4 %	Watt, Archibald H., Ann Arbor, Mich.	80.7 %
Tolan, Thomas L., Ironwood, Mich.	88.4 %	Welbourn, Leland S., Ann Arbor, Mich. ..	85.2 %
Traub, Eugene F., Ann Arbor, Mich.	88. %	Wilkinson, MacNaughton, Ann Arbor, Mich.	85.1 %
Van Volkenburgh, Vivian A., Detroit, Mich.	86. %	Willett, Gaillard P., Ann Arbor, Mich. ...	87.8 %

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

CALHOUN COUNTY

The seventh regular meeting of the Calhoun County Medical Society was held September 3, 1918. The program consisted of a symposium on the Wassermann reaction. Papers were read by Drs. Charles E. Roderick and Dr. A. A. Spoor.

Calhoun County Society met at Battle Creek, October 1, 1918. Dr. W. T. Martin gave an exhibition of the films and methods used by the Surgeon General in combating venereal diseases in the Army.

KALAMAZOO COUNTY

The Kalamazoo Academy of Medicine held a regular meeting on September 10. Luncheon was served at the Park-American hotel. Major Udo J. Wile of Ann Arbor held a skin clinic in the afternoon.

Program of the Kalamazoo Academy of Medicine was held September 24, 1918, at 1:30 p. m. Luncheon at Park-American at 12:15.

1. Calcium Metabolism. Illustrated with Lantern Slides. Dr. A. W. Crane, Kalamazoo. Discussion opened by Dr. B. A. Shepard.

2. Cardio-Renal Examinations for the Army. Dr. Collins H. Johnston, Grand Rapids. Discussion opened by Dr. J. B. Jackson.

3. Heart Clinic, illustrating points in today's paper. Dr. Collins H. Johnston.

Book Reviews

MILITARY SURGERY OF THE ZONE OF THE ADVANCE. By Geo. de Tarnowsky, M.D., F.A.C.S. Medical War Manual, No. 7, authorized by Secretary of War and under supervision of the Surgeon General. Published by Lea & Febiger, Philadelphia and New York. Price, \$1.50.

This is a very interesting manual giving in a concise way the standard methods adopted by the army

in the treatment of wounds, burns, and gas poisoning. The first four chapters describe the organization of trench sectors and the conditions the military surgeon will have to meet with. Treatment is considered entirely from the standpoint of adapting medical methods and knowledge to these conditions. The chapter on traumatic shock is particularly good.

INTERNATIONAL CLINICS. Vol. II, twenty-eighth series, published by J. B. Lippincott Co., Philadelphia and London.

It would be a long task to justly review the numerous discussions and interesting cases presented in this volume. Enough to say that the editors have manifestly preserved the highly scientific and practical standing of these collections. Papers that especially attracted our attention are "A General Consideration of Pancreatitis," by E. W. Archibald, cases of external pachy-meningitis of spinal cord and of ununited fractures in the clinic of Dean Lewis, and the "Surgical Treatment of Exstrophy of the Bladder, by Geo. P. Miller.

GYNECOLOGY. By William P. Graves, M.D., Professor of Gynecology at Harvard Medical School. Second Edition. Thoroughly Revised. Octavo volume of 883 pages with 490 original illustrations, 100 of them in colors. Philadelphia and London: W. B. Saunders Company. 1918. Cloth, \$7.75 net.

Concerning the relative merit of this work, little need be said. Making its first appearance in 1916, its popularity has been well attested by the fact that it has since been reprinted and is now presented in a second edition.

It may be of interest to point out a few of the book's distinguishing features.

Part I. includes a discussion of the relationship of gynecology to the general organism. This will make its strongest appeal to the general practitioner and the subject is handled in a very thorough and

interesting manner. Considerable original data is imparted concerning transplantation of ovaries and a great deal of recent work on sterility has been added. We note in this regard that the author accepts Sanger's estimate of 33% as the incidence of gonorrhea in the production of sterility. Organotherapy and the relation of the organs of internal secretion to the genital organs is discussed from an entirely practical standpoint and excludes the great mass of inconclusive data that has accumulated on this subject.

Description of operative procedures is given precisely and comprehensively. The author is an enthusiastic advocate of the vaginal method of hysterectomy. There are 490 well chosen illustrations.

SURGICAL CLINICS OF CHICAGO. Published by W. B. Saunders Company.

There is quite a symposium on renal calculi in this number of the Chicago Clinics. Two cases of stone in the kidney and one of ureteral stone are described. The subject is discussed from the standpoint of the general surgeon with emphasis on the symptoms and operative technic. Ocshner's views on the etiology of this condition are interesting and appear to be well supported. The number contains a very good discussion by Smithies on 1,000 cases of gall-bladder disease. Some rather unusual conditions are illustrated and discussed in other papers of this volume.

Miscellany

PREVENTION OF MENINGITIS, DIPHTHERIA AND OTHER INFECTIOUS DISEASES IN THE ARMY CANTONMENTS.

Some exceedingly interesting work on the prevention of the infectious diseases originating in the nasopharyngeal tract is being done by army surgeons at various cantonments.

For instance, in an article on "Meningitis at Camp Greene," contributed by Capt. Paul G. Woolley, to the Journal of Laboratory and Clinical Medicine for April, the statement is made that "In the only organization which made use of systematic nasal sprays since the first of the year, not a single case (of meningitis) developed, and also that in those organizations in which sprays were resorted to after the appearance of the disease no other cases appeared." The spray used at this camp was Dichloramine-T. Captain Woolley says that after this experience "one comes to have a very healthy aspect for Dichloramine-T as an agent for the prevention of diseases of upper respiratory tract origin." He adds: "The organization numbered

7 in the chart has, had the lowest measles and pneumonia rate in Camp Greene and is the only one which has systematically used the nasal spray. Its record is striking, and forms a reasonable basis upon which to recommend that the routine use of nasal spraying with Dichloramine-T be introduced into the camps for the prophylaxis of respiratory diseases."

Virtually, the same method of treatment was employed by Major Carey P. McCord, Major Alfred Friedlander and Capt. Robert C. Walker, at Camp Sherman, in the treatment of diphtheria, in an article published in the July 27th issue of the Journal American Medical Association, in which they state that in the treatment of these carriers they inaugurated the use of Chlorazene. They employed "an aqueous solution of 0.25 per cent. strength, administered as a gargle three or four times daily. In certain cases, the application was made by throat specialists to insure the reaching of remote points in the nasopharynx. The gargling was followed with an oily spray of Dichloramine-T of 2 per cent. strength. It may not be maintained that the Chloramin action is exclusively responsible for the appreciable reduction of days in hospital of carriers. This is in part due to the Chlorazene-Dichloramine-T treatment and in part to the general painstaking systematizing of the entire care of such patients. Through the use of these several described procedures, it has been possible to return the carriers to duty after an average of twenty-three days in hospital. During the month of May our systematizing of treatment made it possible to discharge all diphtheria patients (sixteen in number) after fifteen days in hospital, and all carriers (twenty-nine in number) after sixteen days in hospital."

The combined use of aqueous Chlorazene solution and the oil solution of Dichloramine-T promises to be of utmost value, not only in preventing diphtheria and meningitis, but also as a prophylactic in pneumonia, measles, streptococcic sore throat and the other diseases originating in the nasopharyngeal tract.

Chlorazene and Dichloramine-T are manufactured by, and obtainable from The Abbott Laboratories, Chicago, Illinois.

A FIVE MILLION ARMY MEANS FIFTY THOUSAND MEDICAL OFFICERS.

With an army of three million men in the field or in training and as contemplated, an expansion of this force to five million men, the Surgeon General must have in the Medical Reserve Corps at least fifty thousand doctors.

The Medical Corps must keep apace in growth with the army expansion and it behooves every doctor in the United States between the age of 21 and 55, who is physically morally and professionally fitted, to arrange at the earliest possible

moment, his personal affairs so as to offer his services to his country in the capacity of a medical officer.

The United States is in the war to do her part in winning the struggle and this can only be accomplished by a large and well trained body of troops adequately cared for by sufficient number of medical officers. The importance of the doctor's service and its relation to the successful outcome of the war cannot be under-estimated.

As the mobile forces increase in size, so is there an expansion of Base Hospitals and other institutions for the care of the sick and wounded and there should be no lack of officers when required to give to our patriotic boys, that professional attention which is so essential.

It is well for the medical profession of the United States to realize at once that a Medical Reserve Corps of at least 50,000 doctors will be required to meet the demands of the Surgeon General and upon which Corps he can draw for his medical officers.

We believe by this time that the profession of this country must be fully alive to the needs of the Service, so let every doctor who is qualified, feel that he is doing not only his patriotic duty in offering his services as a medical officer, but is relieving the tension of the Surgeon General's Office by placing at the command of the Chief Officer of the Medical Department an adequate force without the frequent beating of drums to supply the necessary number with each increase of the mobile forces.

If you have not already received an application blank for commission in the Medical Reserve Corps, your nearest Examining Board or the Editor of this journal will be glad to supply you.

Iodinized Emulsion (Scott) and Creosotonic (Scott).—The Council on Pharmacy and Chemistry reports that the label for Iodinized Emulsion (Scott) declares: "Each fluidram contains: Alcohol, m. $4\frac{3}{4}$; Rectified Ol. of Turpentine, m. $3\frac{1}{2}$; Iodin, gr. $\frac{1}{8}$; Phenol, gr. $\frac{1}{2}$; Glycerine and Elixir Lactated Pepsin with Aromatic Oils in the form of a perfect emulsion." The Council declares that Iodinized Emulsion (Scott) is not a "pharmaceutical triumph," as claimed in the advertising, but is an irrational mixture—a reminder of a decadent polypharmacy—sold under misleading and unwarranted claims, and that it is inadmissible to New and Nonofficial Remedies because the composition is not correctly declared; because unwarranted therapeutic claims were made; because the name is not descriptive of its composition, and because the formula is complex and irrational. The Council reports that, according to the label, the following formula is claimed for Creosotonic: Contains in each fluidram: "Alcohol, m. $2\frac{1}{2}$; Creosote and

Guaiacol su'phonates of each, gr. 1; Compound Hypophosphites, gr. 1 (including Quinine Hypophosphites, gr. 1-36 and Strychnine Hypophosphites, gr. 1-256), with Iodinized Emulsion (Scott) m. 30." The Council concluded that Creosotonic (Scott) was an irrational mixture sold under unwarranted claims and declared it inadmissible to New and Nonofficial Remedies for reasons essentially the same as those given for Iodinized Emulsion (Scott). After the Council's report on the preparations had been sent to the manufacturer, the Dawson Pharmacal Co., the advice was received that the matter criticized by the Council was no longer sent out. As, however, these irrational mixtures were still being sold and advertised, the Council directed publication of its report (*Jour. A.M.A.*, August 24, 1918, p. 680).

A Correction.—In an article "Dependability of Dosage in Tablets" (*Jour. A.M.A.*, July 27, 1918) the Tailby-Nason Company was included with firms one or more products of which had been found deficient by the Connecticut Agricultural Station. In this an injustice was done the Tailby-Nason Company. The Connecticut Experiment Station has issued a statement that no product of this firm was found deficient and that the name of the firm was included through an error (*Jour. A.M.A.*, August 24, 1918, p. 681).

Diplosal and Acetylsalicylic Acid.—Diplosal is the salicylic ester of salicylic acid and in the intestine is broken up into salicylates. The only advantage of diplosal over sodium salicylate consists in its lesser solubility and therefore in the taste. The same advantage is possessed by acetylsalicylic acid. If diplosal is unobtainable or its cost prohibitive, acetylsalicylic acid may be used in its stead in the same dosage (*Jour. A.M.A.*, August 24, 1918, p. 682).

Two Mail Order Frauds.—One L. E. Bowers conducted a fraudulent medical mail order business in Chicago under the name of Gallstone Remedy Company selling a preparation called "Gall-Tone." Joseph H. Pilson conducted a mail order business in New York City and Jersey City, N. J., under such names as "New Life Remedy Company," "Mail-Order Supply Company," "Vital Fire Remedy Company," and "M. J. Moore, Secretary." Pilson sold a mixture of drugs represented to restore "lost manhood," and another mixture of drugs in effect represented to cause abortion in pregnant women. As the result of an investigation, a fraud order was issued against Bowers and Pilson which denies them the use of the mails for their business (*Jour. A.M.A.*, August 31, 1918, p. 765).

During August the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Heyden Chemical Works:

SILVER PROTEINATE—Heyden.

E. R. Squibb and Sons:

CHLORAMINE—T, Squibb.

CHLORAMINE—T, Surgical Paste, Squibb.

CHLORAMINE—T, Tablets-Squibb, 4.6 grains.

DICHLORAMINE—T, Squibb.

Abbott Laboratories:

Parresined Lace Mesh Surgical Dressing. Abbott.

PHENYLCINCHONINIC ACID—Abbott.

Di-Crotalin Treatment of Epilepsy.—Di-crotalin is a rattle-snake venom preparation which has been advertised by the Swan-Myers Co. as a "treatment for epilepsy, chorea, bronchial asthma, chronic or hereditary nervous headache, nervous prostration incident to change of life, hysteria mania, insomnia, neurasthenia, etc." That any measure of success, sufficient to justify the adoption of the rattle-snake venom treatment for epilepsy has resulted, is not to be concluded from the available reports. Still less evidence is there for the use of rattle-snake venom in the list of conditions given by the Swan-Myers Co. There are a number of good reasons why the cautious physician will shun this treatment and advise against it (*Jour. A.M.A., August 17, 1918, p. 592*).

The Toxic Effects of Arsphenamin.—Recent research suggests that the toxic effects sometimes obtained from the administration of arsphenamin may be caused by the use of an insufficient amount of alkali in preparing the arsphenamin solution for injection. J. Danysz found that solutions of arsphenamin and similar preparations prepared in the usual manner, but with a small amount of calcium biphosphate added, soon precipitated on exposure to air and that these precipitates are readily soluble in sodium hydroxide. His experiments seem to show that a similar precipitation occurs when arsphenamin is injected intravenously; that this precipitation is responsible for both the mild and the severe toxic reaction; and that this precipitation is the more likely to occur the smaller the amount of alkali used for preparing the solution. He reports, however, that a hyperalkaline solution, though less toxic when injected into the vein of rabbits than solutions containing less alkali, caused pain and that sometimes the vein became obstructed and later atrophied. Danysz also found that the toxic action of arsphenamin solutions was increased when the solutions were

injected rapidly. Danysz also advises that small initial (vaccinating) doses should be given to establish tolerance before full doses are administered (*Jour. A.M.A., August 17, 1918, pp. 570 and 596*).

Mammala.—This is a dried milk powder and may be considered as a partially skimmed milk dried by a patented process to which lactose (milk sugar) has been added to make up for the deficient food units caused by the partial removal of the cream. Reduced to a basis comparable with cow's milk, 12 per cent. solids, it appears that protein and ash are normal, the fat low, and the milk sugar high (*Jour. A.M.A., August 10, 1918, p. 488*).

Chlorine Soda Ampules.—Composed of a sealed glass tube stated to contain 4.8 gm. liquid chlorine and a sealed glass tube stated to contain 21.3 gm. monohydrated sodium carbonate and yielding, when the contents of the tube are dissolved in 1000 cc. of water, a solution similar in composition to Neutral Solution of Chlorinated Soda—N.N.R. To prepare the solution the contents of the tube of monohydrated sodium carbonate are placed in a bottle having a capacity of about 2000 cc. and dissolved in 1000 cc. water. The tube containing the liquid chlorine is suspended from a rubber stopper and is inserted into the bottle and the stopper securely inserted. The large bottle (after to break the chlorine tube, the contents of the bottle are then covering with a cloth) is shaken for two minutes or longer. The solution freed from particles of glass is ready for use, or its available chlorine may previously be checked by titration. The solution so obtained is intended for the Carrel-Dakin treatment of infected wounds. Johnson and Johnson, New Brunswick, N. J. (*Jour. A. M. A., July 6, 1918, p. 939*.)

Chlorine Soda Ampules.—The A.M.A. Chemical Laboratory reports that the Chlorine Soda Ampules of Johnson and Johnson yield a solution containing the claimed amount of available chlorine if precautions are taken to prevent loss of chlorine when the solution is prepared. On the basis of the report, the Council on Pharmacy and Chemistry accepted the Chlorine Soda Ampules for New and Nonofficial Remedies (*Jour. A.M.A., July 6, 1917, p. 39*).

Silver Proteinat Heyden.—Said to be identical with protargol (See New and Nonofficial Remedies 1918, p. 362). Silver proteinat-Heyden must conform with the tests, and have the properties described under protargol. The Heyden Chemical Works, New York (*Jour. A. M. A. Aug. 17, 1918, p. 534*).

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVII

GRAND RAPIDS, MICHIGAN, NOVEMBER, 1918

No. 11

Original Articles

BLOOD TRANSFUSION IN THE SMALL TOWN HOSPITAL—A PLEA FOR ITS MORE FREQUENT USE.

WALTER L. FINTON, M.D., F.A.C.S.
JACKSON, MICH.

With the improvement in technique during the past few years a rapidly increasing number of physicians have become proficient in intravenous medication and blood transfusion.

However, the writer has noted with surprise that there are a great many hospitals in small and medium sized cities in which no attempt at transfusion has been made. Good general surgery is being done in these places but for some reason the older surgeons as well as their younger associates have seemed to avoid this simple and valuable procedure.

Today when war time economy urges us to even greater efforts at conservation it seems unfortunate indeed that more men do not have a working acquaintance with blood transfusion.

No doubt a part of this hesitancy is due to the somewhat formidable sounding preliminary blood examination required, with the four group classification of Moss, and the fear of disastrous results if the preliminary blood test is not made and the donor supplied from the proper group.

The preliminary blood test should always be made for the protection of the patient. This has been emphasized by every writer on transfusion. But the practical point that we have not seen mentioned, a feature that is causing undue hesitancy, is that it makes absolutely no difference which particular group (numbers I.,

II., III. or IV.) a donor is in, as long as the patient's serum does not agglutinate this prospective donor's cells. The group classification is very useful in large clinics and medical centers where a number of paid donors are available, but for the operator who has to secure a new donor almost every time he transfuses a patient it is not essential.

Mother's blood may be used to transfuse the new born without the preliminary blood test. And in extreme emergencies a brother or a sister, or the parent that the patient most resembles may be used. This is, of course, not absolutely safe, but is justifiable.

This well known preliminary blood test is very simple but might it be stated again: Secure two drops of the patient's blood in one cc of 2% solution of sodium citrate in a small test tube (No. I.); two drops of donor's blood in same manner in a test tube (No. II.); about fifteen drops of blood from patient and donor in test tubes III. and IV. respectively. After centrifugating for a few minutes two platinum loopsful from patient's serum (tube III.) are put on a cover glass and one loopful of the donor's cells from tube II. is added to the serum and the serum-cell drop mixed. It is then examined as a hanging drop. If agglutination is going to take place it usually does so within two minutes, but it is well to shake or jar the glass slide and wait fifteen minutes before discarding. The donor's serum (tube IV.) and the patient's cells (tube I.) are mixed and examined in the same manner. Agglutination here, however, is not a contraindication to transfusion. So that with no agglutination between patient's serum and donor's cells, this prospective donor may be used for the proposed transfusion. The importance of a Wassermann

test on the donor cannot be over-estimated and should always be made on all donors.

One essential is required for safety. The serum of the recipient must not agglutinate the corpuscles of the donor. A fatal "anaphylactoid" reaction may follow failure to observe this rule.

METHODS.

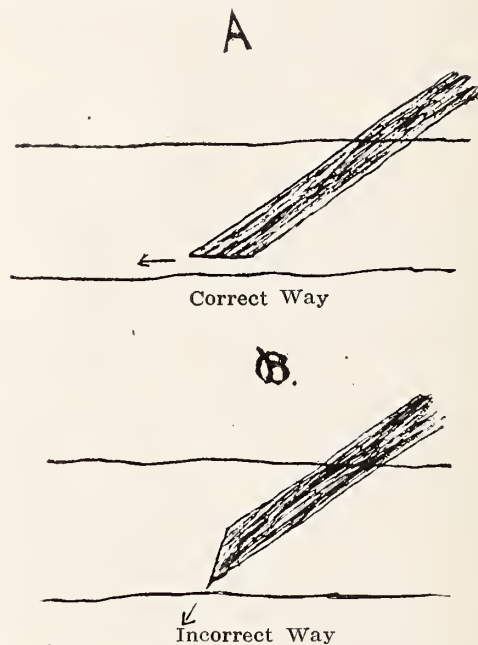
No detailed discussion of the various methods of transfusion will be attempted here. The Carrel method of direct blood vessel anastomosis between donor and patient and the two canula method (Crile-Bernstine) are no longer used to a great extent. The multiple syringe methods of Linderman and Unger are still used by many. Here three or more glass syringes of at least twenty cc capacity are required. A larger number of assistants are needed and one must make a continuous effort to prevent clotting and to keep the needles open. The latter criticism also applies to the Unger syringe method. The Kingston Brown tube and Dr. Nelson A. Percy's modification of it are popular in a few clinics. This method requires incisions and the sacrifice of superficial veins. Not only is this procedure more painful, but with the constantly increasing tendency to give intravenous medication it is unfortunate for an individual to unnecessarily lose his superficial veins.

The sodium citrate method of Richard Lewishohn is perhaps as satisfactory as any method for the physician who is called on only occasionally to do a transfusion. Here 10 cc of a 2% sodium citrate solution is mixed with every 100 cc of blood drawn. The required amount of freshly sterilized citrate solution is put in the receiving flask and the blood allowed to flow into the solution, an assistant constantly stirring to insure prompt mixture and to prevent clotting. It is advisable but not absolutely necessary to strain the blood once through gauze to be sure no clots have formed.

An occasional criticism of the citrate method has been made. Reactions do sometimes occur. But they are usually not severe, and the use of a chemically pure sodium citrate has greatly

reduced the degree and frequency of these reactions. In our limited experience, which has been confined to pernicious anaemia, hemorrhage and septicaemia cases, there have been no unpleasant effects.

Perhaps more failures have occurred in securing blood and in introducing blood into the recipients' veins by trying to use needles of too small caliber, than from any other cause. A good rule is to use the largest needle that will readily enter the vein. A Kolinski needle, 16 gauge, is very satisfactory.



Notwithstanding the advise of some writers to the contrary, the best way to insert the needle is with the bevel down, parallel with the axis of the vein so that the vein will not be so easily transfixted and the lumen lost. (Fig. A.) Veins are frequently hit and then transfixted. (Illustrations.)

As a rule incisions are not necessary. After the needle has been introduced into the vein of the recipient, the use of a universal stop-cock to connect the blood container tube with the needle greatly facilitates matters, and will often prevent the operator from "losing" the vein after the lumen has been entered.

The amount used varies with the age, size, etc. It ranges from fifty to seventy-five cc in infants, to from four hundred to seven hundred fifty cc or more in adults. The larger amounts

as one thousand c. c. or over, which were formerly given, are now given less frequently. The present tendency is to use smaller amounts and to transfuse oftener.

The procedure is repeated once a week as long as required. The same donor, especially if the amount be large, is not used again as a rule for from four to eight weeks.

The most common indications for blood transfusion are: severe secondary anaemia, primary anaemia (so called pernicious anaemia), hemophylia, purpura of the new born, severe systemic infections, especially of staphylococcus and streptococcus types, gas and benzol poisoning. There are a few other conditions for which it has been used.

It might not be out of place to again emphasize the intra-venous administration of normal saline in severe hemorrhage cases and other acute conditions, while waiting for the preparation of blood.

The heart action in these cases will improve wonderfully. Sudden failure of heart action after severe hemorrhage is not entirely due to the loss of the blood itself, but results from a lack of fluid upon which the heart can work.

SUMMARY.

(1) Do not let the lack of knowledge of what particular group a patient is in prevent the employment of this valuable procedure.

(2) The sodium citrate method is very simple and satisfactory, and is therefore especially recommended.

(3) Large sharp needles should be used and they should be inserted with the sharpened plane parallel to the axis of the vein.

(4) In acute conditions, such as severe hemorrhage a normal saline, should be given intravenously while waiting for the preparation of the blood.

TREATMENT OF BRIGHT'S DISEASE.*

J. H. DEMPSTER, A.B., M.D.

DETROIT, MICHIGAN.

Nearly one hundred years ago chronic nephritis was defined as a clinical entity by Rich-

ard Bright of Bristol, England. Bright was one of the noted galaxy of clinicians who made Guy's hospital of old London famous. His "Researches in the Pathology of Diseases of the Kidney" in 1827 described the signs and symptoms of the chronic inflammatory disease of the kidney, which has since become popularly associated with his name. Bright was the first to make chemical and microscopic examination of the urine. Chronic nephritis is a more or less definite clinical entity in which the diagnosis may be made without much difficulty. We exclude such surgical diseases of the kidney as hydronephrosis, pyonephrosis, tuberculosis, neoplasms and suppurative processes within the kidney, leaving the historic Bright's disease, chronic nephritis. The etiology includes the inorganic poisons, chronic infections of the streptococcus and pneumococcus, the latter less frequent, and arteriosclerotic changes which involve the kidney. Elliott, *Journal of the A. M. A.*, September 26, 1917, discusses the etiology of chronic nephritic and hypertensive vascular degeneration. The cause of acute nephritis is bacterial invasion of some sort, usually as we said, streptococcus. According to Ophuls, there is no sharp line of demarcation in the anatomic features of acute, sub-acute and chronic nephritis. To ascertain the exact cause of chronic Bright's disease is not so easy as one might suppose. inasmuch as we usually have to rely on the patient's story which may be in effect that he had scarlet fever, tonsillitis or some other acute infection years before, probably as far back as childhood. As to the extent to which syphilis is a causative factor of chronic nephritis, it is hard to determine. Warthin stated that what was often diagnosed as nephritis was a protean form of syphilis. Syphilitic gummata of the kidney are rare. The status of syphilis in the etiology of chronic nephritis, according to Elliott, is uncertain. Ophuls thinks that spirochaetes cannot produce kidney lesions such as those produced by other bacterial infections. In studying 40 cases of chronic nephritis, Elliott found tonsillitis to be the cause of nine; dental sepsis four; syphilis three; chronic endocarditis and pneumonia

*Read before State Medical Society at Battle Creek, 1918.

three each; other conditions such as puerperal nephritis, bronchitis, infected sores of the foot, scarlet fever, pyelitis, furunculosis, chronic sinus infection, one each. In six of the cases the causative factor was unknown.

The cardinal symptoms of chronic nephritis are, besides albuminuria, which, of itself, does not necessarily mean nephritis, more or less enlarged and forceful heart action, hypertension, changes of greater or less degree in the eye-grounds and casts in the urine: sometimes we get only a trace of albumin which might be easily overlooked, unless one of the more delicate tests be employed.

DIURETICS.

Perhaps one of the important features in connection with the treatment of chronic nephritis is the hitherto almost universal procedure of administering diuretic drugs. Christian, of Boston, discusses the use of diuretics. His viewpoint impresses itself on me as being so rational that I shall state at length his position. He believes that in acute nephritis, basing his opinion on animal experimentation, that the various diuretics, theobromine-sodium-acetate, theocin, caffeine, potassium acetate and water are injurious, that their effect measured by renal excretion is nil, inconstant, or actually depressant, depending upon the severity of the renal lesion, and concludes with the positive statement, "I have yet to see the case of severe, acute nephritis in which I felt that diuretic drugs did any good." Patients with edema of cardiac origin are the more numerous, presenting as they do myocardial insufficiency, often showing auricular fibrillation and other forms of arrhythmia. In fact where edema is present in chronic nephritis, it is largely of cardiac origin and accordingly we have a marked improvement at times on the administration of digitalis. I prefer a reliable tincture, to the more or less indifferent infusion. Christian claims that diuretics have very little effect in increasing the urinary output in a true nephritis. The other diuretic drugs are effective in the descending scale. Diuretic drugs are further of but very little use in treating uremia. I quote Christian:

"If I were to attempt to sum my views as to the use of diuretic drugs in nephritis I would say that in uncomplicated nephritis of all types diuretics are either not indicated because there is no need for increased urinary output, or where there is a need for diuresis to remove oedema or detoxify, they do no good. In other words, in nephritis as such they should not be used. Reduction of fluid intake, salt—poor diet, sweating and purging are better methods for removing oedema. For toxic symptoms bleeding, sweating and purging are more efficacious than diuretic drugs. On the other hand in patients with cardiac insufficiency and relatively little organic renal lesion diuretics are extremely useful to aid in the removal of fluid accumulated in the body. Under these conditions they seem to work best when given intermittently in part because of their tendency to cause nausea, and in part because study of renal function indicates that frequently following very active diuresis, renal function is temporarily depressed. They are most efficient when given after a short period of digitalis therapy. In the patient with oedema of nephritic origin without cardiac insufficiency digitalis alone, however, in my experience produces no diuresis, and when followed by a diuretic drug, little or no increased urine flow results."

USE OF OTHER DRUGS.

Regarding drug treatment in general, there are no remedies that can improve the damaged kidney cells themselves. Basham's Mixture, so largely prescribed in nephritic cases, is almost useless. Stengel places it in the category of placebos. Often where the meat diet is reduced materially or eliminated altogether it is desirable to administer iron. I favor the hypodermic injection of iron in such cases, especially to combat the anemia which is often an accompaniment of chronic Bright's. Iron is best given in organic combination, as I shall point out presently. Drugs should not be used to reduce vasomotor tension, besides any means that we have at our disposal for the reduction of blood pressure have only a temporary effect and that effect is on the systolic pressure only.

Saline cathartics are useful and preferable to calomel on account of the selective affinity of mercury for the kidney.

ACTION OF ADRENALIN.

The internal secretions have been brought into service in the treatment of nephritis. Ercolani in 1910 called the attention of the medical world to the advantages of treating nephritis by means of extracts of the suprarenal gland. The Italians have employed this method somewhat extensively. The anatomic proximity of the suprarenal gland suggests the possibility of its being affected in a process which leads to degeneration of the kidney. The adrenals suffer severely in a nephritis, which is traceable to diphtheria, typhoid or smallpox. The conditions, such as disturbance in the heart muscle, and bulbar and neurotic changes are attributed to suprarenal insufficiency. Ercolani administers adrenalin even in doubtful cases. Roux claims that adrenalin regulates the kidney as digitalis does the heart. Its marked vasomotor constrictive powers serve to modify the epithelium of the kidney, which has been altered by toxemia. Adrenalin has, therefore, the double action of a neutralizer of toxins and of vaso-constrictor, which conquers infection and corrects the deranged condition and function of the kidney cells.

I have had no experience with adrenalin in nephritis.

A great deal of attention of late has been given to focal infections. The clinician should not overlook the tonsil or carious teeth as possible sources of kidney infection, and should not fail to carry out the necessary operation.

Vaccines might be of advantage especially in those cases in which there are no manifest infective foci, or in cases in which the source of infection cannot be removed by surgical means.

TREATMENT OF ACIDOSIS.

Acidosis is one of the commonest of pathologic states, almost constant in the latter stages of nephritis and perhaps a constant accompaniment of most other conditions, especially with the approach of death. It is more than probable that the coma which precedes

death in all diseased conditions is the result of acidosis. Acidosis involves a depletion of the body's alkali reserves, and specifically a depletion of the bicarbonate of the blood. Acidosis may be due to the production of acid, the ingestion of acid, lack of alkalies in the food, failure to eliminate acid phosphate but always, according to Henderson (*Science*, July 1917), involves at least a diminution in the concentration of bicarbonate in the blood. Acidosis then is a state of diminished sodium bicarbonate in the blood. A means of recognizing acidosis is one which Henderson, in his paper, describes as a simple physiological test which depends upon an observation that in different individuals the amount of soda administered by the mouth necessary to make the urine alkaline is a variable quantity. Clinically the only symptom that may be considered positively pathognomonic of acidosis is hyperpnea or deep breathing, the so-called "air hunger." A cherry-red coloration of the lips is occasionally observed but is of little diagnostic value.

Howland and Marriott Baltimore in the *Pennsylvania Medical Journal* advise the use of alkalies in all treatment of acidosis. Sodium bicarbonate administered either by mouth or intravenously is preferable. One to four grams may be given by mouth at a time in a watery solution, at intervals of not less than two hours. The intravenous method is indicated where on account of excessive nausea the sodium salt cannot be taken by mouth. The intravenous solution should be 4 per cent. in strength and made of freshly distilled water. Sodium bicarbonate in bulk has been found to be always sterile. Accompanying this the patient should be given copious quantities of water necessary for elimination of acids whether neutralized or unneutralized.

The addition of five or ten grams of soda to the food per day is enough to make the urine of a healthy person alkaline, and if more than that is retained, experience justifies the conclusion that a state of acidosis exists. If sodium bicarbonate is administered at frequent intervals in quantities just sufficient to make the urine as alkaline as the blood, acidosis can-

not exist. Henderson advocates the testing of the urine with litmus paper obtaining the so-called amphoteric reaction, namely, that of turning blue litmus red and red litmus blue. In any serious illness the test for acidosis should be made and the acidosis remedied. Fischer employs alkalization in the treatment of acidosis of nephritis, giving sodium bicarbonate in large amounts. Henderson thinks the quantity of sodium bicarbonate administered should be sufficient only to correct the acidosis. Its excess or deficiency should be checked up by frequent examination of the reaction of the urine.

The dietetic treatment of nephritis has received great attention during the past five years. So important, in fact, has the study of dietetics become in the treatment of this condition as to fundamentally change the therapy which is not a true nephritis, the kidney shows of nephritis. In the parenchymatous form, an inability to secrete water and salt. In this condition there is, however, little nitrogen retention so that the dietetic treatment consists largely in a restriction of the intake of water and depriving the patient of salt. The supplies of fluid not required to maintain the proper ratio will be eliminated. It is estimated that as much as six or seven pounds of fluid may be retained in the deeper structures without producing a visible edema. Probably the treatment of edema of parenchymatous nephritis by salt retention is the most important advance in the treatment of this condition.

In true interstitial nephritis there is practically no retention of water and salt. The patients do not have edema but we do have a marked retention of nitrogen resulting from the metabolism of proteins. The kidney shows inability to excrete uric acid because being eliminated with the greatest difficulty it is the uric acid, which is the first to be retained. As the nephritis becomes more severe, the kidney is unable to eliminate urea. In the majority of severe cases, we find not only retention of uric acid and urea but also of creatinin.

The nephritic patient requires about the same amount of protein as the patient suffer-

ing from any other disease, namely from one-half to one-fourth gram of protein per kilogram of body weight, or in other words, the patient who weighs 150 pounds should have from 40-50 grams of protein per day. It has been proven by physiologic tests that a man may spare his body protein by taking carbohydrates and fats. Lemonade diet, described by Chase (*Medical Clinics*, November, 1917) furnished the required energy in-take in the form of carbohydrates. In severe cases, the patient should be put on lemonade diet of four glassfuls per day, which provides him with 1242 calories and 8 mg of iron. A patient can subsist for three or four days with four glasses of lemonade a day without drawing upon his body proteins. The first demand upon his muscles for energy will show itself in an accelerated pulse rate, showing that the heart muscle is being taxed. Proteins are necessary for keeping up strength, though not for energy. The condition of the kidney, however, as regards nitrogen excretion will not permit of the high protein diet. Proteins are found to vary markedly in their nutritious value. Chase makes the distinction between what he calls complete and incomplete proteins: the former are furnished by such foods as eggs, meat or milk. The latter are present in vegetables and grains. Incomplete proteins must be supplemented by a minimum amount of the complete protein and vice versa.

A supply of the mineral elements of food in the treatment of nephritis is very important, for death will come more quickly to the patient whose diet is deficient in the necessary constituents than to one subject to starvation. There is a general tendency among nephritics to become anemic, as already pointed out, hence the necessity of providing a diet rich in iron. The daily requirement of iron is 15 mg. Iron is much more readily assimilated when given in organic combination than in such inorganic mixtures. No prescription of iron medical agents will take the place of iron in a diet. Among the articles of diet rich in iron are raisins, rye flour, oat meal, prunes, spinach, lettuce, white potatoes. A condition frequent-

ly, in fact, usually present particularly in the advanced nephritis is acidosis with dyspnoea. Acidosis, in a word, is due to the inability of the kidney to eliminate the normally formed acid substances, particularly the acid phosphates. This condition calls for a diet with a marked alkaline ash such as fruits, leaves, and tubers. Among the articles of diet, which are comparatively basic are spinach, prunes, raisins, carrots and those with a marked acid ash are pearl barley, oatmeal, rice and white flour. It is well to observe this characteristic of foods in not only nephritis, but in the diet of children, as well as conditions which show a tendency to acidosis. Nephritics who show a tendency to acidosis should avoid oatmeal, rice, wheat, etc. Far better pay attention to this detail in diet than to endeavor to offset acidosis by the administration of sodium bicarbonate, which though often indicated has a tendency to destroy the appetite. Another feature that should not be overlooked consists of what are known as food accessories such as vitamins. To avoid scurvy calls for an addition of uncooked fruit to our dietary. The banana is a very valuable food. This is because it is of value in furnishing alkaline ash, is low in protein, and being mild in flavor, can be taken in quantity for some time agreeable to the patient. If used raw, bananas must be perfectly ripe, in which state they furnish an antiscorbutic element. In making bread for these patients phosphate baking powder should not be used, since the nephritic is unable to eliminate phosphates through the kidneys. Bread which contains considerable salt and phosphate baking powder is very apt to produce retention.

*Sherman Chemistry Food and Nutrition.

DISCUSSION.

DR. M. A. MORTENSEN spoke on the treatment of Nephritis and advocated the exclusion of Protein in uremia acidosis; and the use of fruits, restricted diet, rest and the increased elimination of the skin.

DR. ROTH, Battle Creek, that as a means of diagnosing acidosis, the power to hold the breath was quite hopeful also the instrument devised by Merritt whereby it was possible to determine the CO_2 tension in the alveolar spaces which is directly proportional to the amount of acidosis.

DR. W. DE KLINE, Flint, averred that Dr. Dempster should be given credit for a great work and urged every one to read his paper. In closing Dr. Dempster had nothing more to add.

EXTRAVASATION OF URINE.*

WILLIAM E. KEANE, A.M., M.D., F.A.C.S.

DETROIT, MICHIGAN.

By extravasation of urine is meant its escape into the adjacent tissues of the urinary tract. It is perhaps the gravest complication to the various pathological lesions of this canal of elimination.

Because of its destructive ravages, its very high mortality rate, the fact that it is by no means uncommon, and that it is but rarely presented in general meetings of this society, I wish to relate a few experiences and offer the subject for discussion.

In the Urological service of St. Mary's Hospital, Detroit, the various types of these sufferers are frequently met, and I wish to sketch some observations of cases treated in the service of Dr. F. W. Robbins and myself, briefly calling attention to pathology, symptoms and treatment.

The fact that this condition usually occurs in debilitated subjects who have consistently neglected a contracted stricture of the urethra, may be rightfully charged as the primal cause of the large death rate, but failure to recognize early the warning signals, improper or delayed treatment, must in many instances share the blame for failure.

CLASSIFICATION.

For the purpose of orderly review, extravasations are best classified into two general groups, first those of normal urine from bladder to urethra in which no previous stenosis existed, and, second, septic extravasations, which are nearly always associated with narrowings of the urinary outlet. The first type are generally the result of injury or accident, which cause fracture of the bones of this region

*Read before the Michigan State Medical Society at Battle Creek, 1918.

and produce a tear in the urethra or bladder. They are by far the less frequent, with usually more hopeful prognosis, though the gravity of the injury generally determines this ratio.

From observations of Simon and Menzel, and later proven by other workers on this subject, it has been shown that normal acid urine may flow over a fresh wound surface and usually produce no trouble unless due to bacterial action, but alkaline urine will kill healthy tissue and cause sloughing very quickly.

Extravasation of normal urine does its damage as a rule by pressure and mechanical irritation, which is followed by infection and necrosis and hence delays the untoward symptoms until sepsis appears several days or even weeks after the injury, and the original rupture is healed. As an example of this type of extravasation, the following cases will serve:

Case I. A. J., aged 26, hotel porter, admitted to St. Mary's hospital one hour after being crushed by elevator against a floor landing. There was severe fracture of pelvic bones and unmistakable evidence of bladder rupture. After supra-pubic incision, the rent in the bladder wall was found and closed. The surrounding tissues were cleansed of urine as thoroughly as possible and the bladder wound was united without drainage. The patient voided after two days naturally and the bladder wound healed nicely. But a few weeks later the patient died of sepsis, which could be traced to no other source but the escaped urine, which had evidently not been removed at the time of the operation.

Case II. J. T., aged 33, butcher entered St. Mary's hospital December 3, 1917. Bones of the pelvis had been broken two weeks previous by horse falling on him; he was seen at his home immediately after the accident and there was evidence of hemorrhage from the urethra. An attempt was made to pass a catheter unsuccessfully. Supra-pubic drainage was instituted by the surgeon who had seen him first and because of unsatisfactory home surroundings he was sent to the hospital for better care. Examination after his entrance to the hospital disclosed the fact that the urethra had been ruptured at the vesical neck and an effort was made to keep a rubber catheter in the canal, but this was expelled repeatedly by contractions of the urethra. Because of the very severe fractures and general condition it was not deemed advisable to further interfere surgically. The cellular tissues gradually became more septic from the continual irritation of the urine and the

patient died from urinary septicemia about one month later.

From these two cases some suggestions are apparent. If the patient is seen early and the tear located, repair should be made at once if the urine is clean, but particular care should be exercised to clean out what urine has escaped to the surrounding area. Drainage of gutta percha should be left in from two to three days in order to take care of what we can not reach with other methods. If the urethra has been torn external urethrotomy is indicated and after suture of the wound an indwelling catheter is best left in the urethra from three to four days. If the cases are seen late and sepsis is already present, the choice is only for complete drainage of the damaged and gangrenous tissue.

Because of the relative infrequent number of this classification of cases and the far greater percentage of cases of the septic urine infiltrations more attention will be given to these infected types.

No extravasations have been met in our experience higher than the bladder, and therefore reference will only be made to those pathological conditions between the meatus and the bladder.

ETIOLOGY.

A review of the literature on the causes of extravasation shows the complete change of many of the fundamental ideas held regarding this malady.

Formerly, the accepted view held was, that all urinary pouches and dilatations of the urinary canal, as well as infiltrations and extravasations were caused by hydrostatic pressure of the urine against a weakened thin urethral wall by the continued distention of bladder, the urine bursting through and causing these complications.

Escat and Gottet deny that such a clinical picture exists of mechanical extravasation, and Keyes adds that the violent straining and agony suddenly relieved by a feeling of something giving away, in the perineum and followed by extravasation is but a description devised to fit a theory.

Sir Henry Thompson describes this relief in his lectures as the clumsy effort on the part of nature to perform the work of the surgeon. The multiple fistulae in the perineum described by someone as the sprinkling pot variety are evidence of the results of such effort when the sufferer's life is spared.

That the explanation of such conditions from mechanical pressure alone is inadequate seems apparent from the following reasons:

First: The extravasation may take place in front of the stricture.

Second: That in some instances there may be no stricture, or the narrowing, if it exists, is very slight.

Third: There are cases in which there is apparently no communication to the urethral canal.

Fourth: Albarran and Delbert have shown that there is no urine in some of the cases they have examined, and the fluids thought to be urine are some of the products of acute phlegmonous infiltration.

As an illustration of classification No. 2, and the only one of its kind observed in my experience, the following case is offered:

Case III. Mail carrier entered St. Mary's hospital after development of a large swelling in the perineum and scrotum. He had been a sufferer from partial retention for several years, but denied history of gonorrhoea or injury.

The patient had been watched for several days, during which time the swellings grew larger, and suddenly, after a violent straining, he felt something give way, and his symptoms rapidly grew worse. Diagnosis of extravasation was easily made, as the red area of edema was rapidly mounting toward the umbilicus, and the scrotal skin was gangrenous.

After several incisions were made to drain, a filiform was introduced into the bladder, followed by a No. 12 F. steel catheter. On inspection of the meatus it was observed that it was of the pin point variety, and evidence of an old scar was apparent.

After meatotomy was performed a large calibrated sound easily entered the bladder, with no further evidence of stenosis. The destruction of scrotal tissue was so extensive in this case that both testicles were exposed, but with persistent care given by the intern on our service, not only was the period of recovery short (about five weeks)

but the patient left the hospital with the scrotal skin entirely regenerated.

In the light of the recent researches, the modern theory, therefore, rather explains this malady and its essential phenomena as an inflammatory rather than a mechanical complication of stricture.

In nearly all urethras strictured over a long period of time the area of peri-urethral inflammation exists that may at any time develop into an abscess. A suggestive fact is that many of these infiltrations and urinary abscesses connected with them originate in the glands of Littre and Cowper and are manifested as perineal abscesses.

The area of trouble is usually behind the stricture, but rarely may be found in front of the scar, and may cause dilatation of the urethra, peri-urethritis, peri-urethral abscesses or gangrene of the urethra.

These suppurations may or may not break into the urethra. If they do, the urine enters the already infected district and aggravates the trouble by adding secondary infection. The urinary element then becomes an important factor of the process, but is not the usual agent.

While in the beginning of the patient's stricture he may have symptoms of bladder irritability, due to irritation in the region of the trigone, which condition produces frequent desire to urinate, as the stenosis increases fibrous degeneration takes place, the bladder wall loses its tone, which predisposes to pathological changes in the old debilitated individuals stricken with these diseases. The course followed by the fluid extravasated is determined by the anatomy of certain structures involved

ANATOMICAL CONSIDERATIONS.

The dividing planes of the perineum are the fascia and the folds of the triangular ligament. The superficial layer of the perineal fascia is attached laterally to the pubic arch; posteriorly to the triangular ligament; anteriorly it continues up over the cord and abdominal wall, and medianly to the shaft of the penis. The triangular ligament is attached laterally to the pubic bone, and its base fuses with the

superficial fascia. This divides the perineum into two compartments, the membranous lying behind the triangular ligament. The three common varieties of extravasations are, viz:

(A) When the urethral break is anterior to the anterior leaf of the triangular ligament;

B) In which the leakage takes place between the two layers of the triangular ligament;

(C) In which the opening is behind the posterior leaf of the triangular ligament.

In the first classification the process may burrow its way forward into the cavernosa and appear on the dorsum of the penis or more frequently it breaks through and makes its way to the areolar tissue of the scrotum and may spread up to the symphysis and over the lower abdomen.

In the second class the course taken is toward the perineum and the fluid may extend as far as the tuberosities of the ichium or may break through the perineum. These are the types that discharge pus and urine through the resulting fistulae for a long time.

In the third classification of extravasations the burrowing may be toward the rectum, pelvis, space of Retzius, or may perforate the peritoneum.

SYMPTOMS.

These patients may smoulder with the ordinary symptoms of stricture for a long time and then suddenly complain of swelling along some part of the urethra, with increased pain, more frequent desire to urinate, or with complete retention.

If the extravasation is slow and gradual it may be followed by abscesses which open and drain for a long time. However, if the process is more acute and the escape of fluid is through one of the three routes mentioned above, the local symptoms are those of acute poisoning, with an irritating fluid. The parts become swollen and edematous rapidly, and the skin color will vary from red to purple to brown, and later gangrenous spots will appear as the superficial circulation is interfered with by the deep pressure of the escaping fluids. Blebs appear over the swollen area, which may become

enormous, and pus and urine fill these tumor cavities.

The general signs accompanying the local symptoms are as a rule, shock, septicemia, irregular, rapid pulse, anxious expression, dry tongue, glassy-eyed delirium, rapid breathing, and fetid breath. The rapidity of the morbid changes is remarkable, and unless relieved death follows from coma. Cases of this variety are frequently referred to the urologist from another service in which valuable hours have been lost because symptoms of the sufferer were confounded with those of pneumonia, typhoid, malaria, or septicemia of undiscovered origin. This type of patient generally enters the hospital after unsuccessful effort had been made to relieve retention with a steel instrument. Due to stricture, generally in the membranous urethra, the wall has been perforated and the catheter enters the deep compartment. As the canal is narrowest at this point and curves upward it is the most likely damaged and the urine will find its way behind the triangular ligament and extravasate under pressure toward the line of least resistance. In many instances there is a chill following this operation, which is likely to be called urethral chill, and therapeutic measures alone are instituted for the accompanying symptoms, which are as a rule mild at this period of the trouble.

Two such cases entered St. Mary's Hospital recently. Both had large areas of brawny swelling in the scrotum and perineum, which were being watched at home as ordinary abscesses until properly developed for the incision.

Case IV. Frank C., aged 45. Patient had been a sufferer with urethral stricture for ten years. One week ago consulted physician for treatment and internal urethrotomy was performed under local anaesthesia. Four days later an effort was made to introduce a sound of 23-French calibre. A few hours later the patient began to complain of pain in the region of the bladder with repeated efforts to urinate. The physician prescribed a capsule containing one-quarter grain of morphine and 1-100 grain of atropine. After the second capsule was taken the patient began to show symptoms of collapse with wildly dilated pupils. Twenty-four hours later I saw the patient, discovered a large brawny, swelling on the right side of the perineum,

extending toward the tuberosity on that side. He was immediately ordered in the hospital, and incisions were freely made in the diseased areas. A finger introduced into the cavity on the right side easily found its way into a rent in the membranous urethra after external urethrotomy was done. The patient died in twelve hours, never having regained consciousness.

In all long standing cases of stricture granulations are always present to a greater or less degree, and due to the constant intra-urethral pressure during attempts at urination during partial or complete retention, we may have perforation through a small area of ulceration, which forms a periurethra abscess, accompanied by the usual chills and fever. The abscesses may later spread into the pelvis of the perineum and scrotum and may not be diagnosed until the sudden appearance of shock and other alarming signs. Care, therefore, should be taken to inspect diligently the perineum in all patients who are strictured and have partial retention and who show symptoms of sudden complete retention, accompanied by sharp pain, chill, sweats, feeling of something giving away, followed by rapid swelling of the perineum and scrotum, as this means rupture of the wall of the abscess into the urethra and beginning urinary infiltration.

TREATMENT.

As to the treatment of these grave conditions, the theory is sufficiently plain—establish thorough drainage and prevent further extravasation.

In considering the prevention of this complication I wish to endorse the point made by Wolfer regarding puncture of the bladder.

Frequently it is deemed wise by the surgeon to aspirate the bladder superpubically during complete retention, because of inability to pass a filiform. If we must resort to this emergency procedure, it is best to use a very small calibre needle and follow in a very few hours with a radical operation for drainage of the bladder.

If we use the large trocar such as frequently adopted for such use in the past, the tear in the diseased wall of the bladder is very apt to

remain open, and with the refilling of the bladder which is irritated the septic urine is forced through the opening and may extravasate in several routes, particularly the dangerous space of Retzius, and the region being difficult to drain, death may occur before we are warned of any localized signs.

One of the cases entered the hospital one night after considerable damage had been done the canal in an unsuccessful effort to catheterize at the distended bladder.

After failure to enter with a filiform under general anaesthesia, suprapubic puncture was done, and the patient was put to bed until the following day; a drainage operation was performed, and the stricture dilated. The patient began to grow worse, despite the fact that the urinary output was normal and no external evidence of extravasation was visible for three days. Temperature and pulse rose rapidly, and the area about the pubis and sides of the bladder became tender, red and swollen. Despite heroic efforts to drain this dangerous region, the patient died of sepsis.

Individual extravasation will of course determine the location of the slits demanded, and it will suffice to add that the entire edematous area should be drained as rapidly and thoroughly as possible, without regard for ultimate disfiguration. Keyes put it, that the timorous incision is the patient's death warrant. The tissues should be squeezed free of all pus and washed well with 1-5000 Bichloride. Necrotic tissue is best cut away at once, and it is a matter of surprise in some instances to note the rapid regeneration of the cells in these regions, after enormous destruction of necrotic areas.

Cases are frequently met in our wards in which the testes have been left bare after the destructive changes have passed, but within a few weeks they are completely covered by new tissue, without the aid of grafts.

The finger should be introduced into any pockets that burrow, and all septic material removed as fully as possible. The after care is important, and an orderly that can be taught to realize the importance of frequent dressings

is a most important and valuable ally in bringing the patient through. Permanganate of potash, 1-5000, has been our choice as an irrigating fluid to cleanse, because of its oxydizing properties, and wet dressings of this same fluid, covered with oily silk, are laid over the areas of destruction.

To establish urinary drainage through its proper channel in many instances is advisable, especially if the urine is not very septic, but in the presence of foul urine, cystostomy, with drainage, and later attention to the stricture, seems to be the safer method of treatment.

TO SUMMARIZE.

1. After leakage of clean urine accurate location with repair of the tear and thorough cleansing of the tissues of escaped urine gives the best chance for recovery.

2. Alertness in observing the patient with long standing tight stricture who have sudden chill and close inspection of the perineum will save many lives by instant attention to the extravasated tissues.

3. Attention to small periurethral inflammations early will prevent urinary extravasation.

4. Drain through the natural channel if possible, but many septic urines are best handled by suprapubic cystostomy.

5. Incise freely all areas of odematous tissue and remove the necrotic sloughs without regard for future disfiguration.

7. Aspirate with small calibred needle when necessary.

101 Fort West, Detroit.

THE TEST OF LABOR.*

GEORGE KAMPERMAN, M.D., F.A.C.S.

DETROIT, MICH.

Obstetrics has been about the last branch of Medicine to receive any recognition as a specialty; even at this period we must admit that the attention and consideration given to the pregnant patient is indeed meager. Pregnancy

is a physiologic condition, and we have looked upon all antepartum disturbances as inevitable and something to be borne with patience. It is true that often the only comfort we can offer patients is that time will relieve them of their distress. But too often such encouragement is given without any attempt to study the conditions. Labor also is so physiologic, and women have delivered themselves for so many centuries without much aid that we have fallen into the habit of considering everything normal, and hence not interesting or necessary for study, and have just trusted to luck that things would end well.

In spite of this attitude we can readily arouse our memories to past experiences and recall occasions which testify that there are interesting and unusual happenings even in obstetrics. As in every other field of medicine, so also in obstetrics—the more carefully we study and examine our patients, the more interesting and unusual we find them. It is true that in order to find the abnormal conditions we have to go through a great deal of normal material. But the discovery of an occasional abnormal finding makes it all worth while, and unless we carry out this plan and investigate and examine our patients, we have no right to assume that we have done our best for them. The general practitioner has been and no doubt always will be the obstetrician for the largest number of our women, and rightfully so. But the patient has a right to ask of him that he equip himself so that he can practice his art intelligently. When he has complied with this requirement, then, and only then, will he have done his duty to his patient. The fact that there are still so many problems unsolved does not excuse us for our indifference.

Difficult labor was no doubt one of the first obstetrical problems to demand special thought. The urgency of the condition would of necessity have forced this upon the profession. The importance of the study of the patient during pregnancy not having been taught the laity during the earlier centuries, she usually was not seen until labor was in progress. The at-

*Read before the Section on Obstetrics and Gynecology, Michigan State Medical Society, May 8, 1918.

tempts to solve the problem were then directed toward the delivery of the patient, and it was not until a later period that efforts were made to discover the cause for these difficult labors.

Pelvimetry was first practiced in the eighteenth century. External pelvimetry was first attempted, and unfortunately rather definite deductions were made from the earlier observations. For instance, Baudelocque taught that the conjugate vera could be accurately estimated by deducting 7½ cm from the external conjugate. Later it was observed that the solution was not quite so simple, and it was learned that in two pelves with the same sized external conjugate there might be as great a difference as five centimeters in the true conjugate. This at first threw pelvimetry into disrepute, the critics arguing that since pelvimetry was not absolutely accurate or definite, it had no value at all. In spite of its limitations, nevertheless, we may consider that it allows one to draw certain important conclusions. Williams believes that we can, in a general way, say that when the external conjugate measures twenty or more centimeters, the true conjugate will rarely be found shortened. When it measures nineteen or eighteen centimeters the true conjugate is shortened in probably about one-half of the cases. When the measurement is seventeen centimeters or less, pelvic contraction is almost invariably present.

Unfortunately, the true conjugate can hardly be measured in the living patient. In practice the nearest approach to this is the determination of the diagonal conjugate, and this can be done as accurately by digital examination as by any instrument so far devised.

FREQUENCY OF PELVIC CONTRACTION.

We must not underestimate the frequency of pelvic contraction. As mentioned before, the more careful the search for abnormalities, the more unusual conditions we find. Many difficult labors go without explanation because of the neglect of pelvimetry. In the various European clinics statistics show from eight to thirteen per cent. of pelvic contraction.

The writer has looked up the pelvimetry findings of 216 consecutive cases. These measurements were all taken by one worker, and the patients represent the class that come to us in private practice. Probably the percentage of abnormalities is slightly higher than the average, since a few of the patients with pelvic contraction were referred just because of this finding. Using the dimension of the external conjugate as a basis for grouping, the following table can be made:

Size of External Conjugate	Number of Cases	Per Cent.
20 plus	26	12.0
20	76	35.3
19	69	32.1
18	36	16.7
17.5	4	1.8
17	5	2.3

According to Williams we might then consider that the cases showing a measurement of twenty and twenty-plus centimeters are almost sure not to present any pelvic contraction. These cases number 102, or 47.3 per cent. of the series. Those measuring nineteen and eighteen centimeters number 105, or 48.8 per cent, and Williams thinks that a large percentage of these may show some pelvic contraction. Those measuring less than eighteen number nine, or 4.2 per cent., and are almost sure to show some narrowing of the pelvis.

RELATION OF DYSTOCIA TO PELVIC CONTRACTION.

In general, the pelvimetry records in this small series show that about half of the patients could be considered normal in dimension. The other half, although not all definitely contracted, should at least be considered as "suspect." This does not mean that half of all these patients would have difficult labors. But it does mean that we must consider that the possibility of difficult labor does exist.

Pelvic contraction may occur in a variety of forms. From the clinical standpoint we may consider that pelvic contraction may occur at the inlet, or at the outlet, or both. But we

must not forget that dystocia may be caused by other conditions than pelvic contraction. Besides the resistance offered by the birth canal, we much reckon with the size and position of the fetus, as well as the nature of the expelling forces. A moderately contracted pelvis might allow an easy birth of a moderate sized and normally presenting fetus, if the uterine forces were sufficiently strong. But on the other hand the same sized pelvis might offer sufficient resistance to a larger fetus so as to make the labor quite difficult, and it might even prevent birth if the expelling forces were deficient. The question of delivery then often becomes a matter of proportion or disproportion between the fetus and the birth canal. And this is the information that the clinical birth record gives us. When we allow a patient to go through a test of labor what we are trying to ascertain is this relationship in size between that particular pelvis and fetus, and each patient presents an individual problem which cannot be determined by a standard of measurements alone.

The clinical records of this series of 216 patients have been studied to ascertain as nearly as possible which of the cases of dystocia could be ascribed to pelvic contraction, or rather to a relative disproportion.

Of the 102 patients with normal pelvic dimensions, eight had difficult deliveries. And we may interpolate here that by difficult delivery we refer to a delivery that requires assistance. In our series a long labor was not necessarily classified as a difficult labor. In six of these eight patients the fetus occupied a posterior position (5-O.L.A.; 1-O.R.A.) In one case the baby was very large, weighing ten pounds and twelve ounces. In the other case the pelvic outlet was contracted, causing dystocia in the second stage. In none was there any disproportion at the pelvic inlet, engagement occurring readily in all cases.

Of the 105 cases, with the external conjugate measuring either eighteen or nineteen centimeters, 14 had difficult deliveries. In 12 cases the disproportion was at the outlet, all these patients having funnel pelvis. In these

cases engagement proceeded normally and progress ceased when the head reached the outlet. In all these cases labor was terminated by low forceps. In the other two cases there was relative disproportion at the inlet. One patient was allowed to have labor pains for 48 hours, and then the head not having engaged, an abdominal Cesarean Section was performed. The patient recovered, although the convalescence was rather stormy. The other patient had labor pains for sixty hours. The membrane had ruptured two days before labor began. For that reason an abdominal Cesarean Section was considered contra indicated, and a pubiotomy was performed by the semi-open method. This patient died later from embolism.

Of the patients whose external conjugate measured $17\frac{1}{2}$ centimeters one developed a toxemia at $7\frac{1}{2}$ months requiring premature induction of labor. The fetus was small which no doubt accounted for the easy and normal delivery. This calls our attention to premature induction of labor as a treatment for contracted pelvis, and its usefulness must not be overlooked. Another patient with the same measurement was given a twelve hour test of labor, but there being no engagement, abdominal Cesarean Section was performed. Two patients with this measurement had spontaneous delivery, one after an 18 hour labor, the other after a 52 hour labor.

Of the five patients measuring seventeen centimeters, two had a relative disproportion at the outlet (funnel pelvis) and required low forceps for delivery. In two there was no engagement of the head after a test of labor, one for 22 hours, and one for $31\frac{1}{2}$ days, and in each case abdominal Cesarean Section was performed, both with good recoveries. One case was brought under our care after two days of labor with unsuccessful attempts at forcep delivery in the home. Failing in this, the patient was sent to the hospital. Fetal death was diagnosed and craniotomy performed. This would not have been a case for either Cesarean Section or pubiotomy, and probably a craniotomy would have been performed even though

one could not have been so positive about fetal death.

These results can be summarized as follows: Of 102 cases with the external conjugate twenty or more, none showed disproportion at the inlet, but one showed a disproportion at the pelvic outlet. Of the 105 cases measuring eighteen and nineteen centimeters, two showed disproportion at the inlet, while twelve showed disproportion at the outlet. Of 9 cases showing a measurement of 17—17½ centimeters, four showed inlet disproportion, while three of the others showed outlet disproportion. These results could be tabulated as in this table:

Size of External Conjugate	Number of Cases	Inlet Dispro- portion	Outlet Dispro- portion
20—20-plus	102	0—0 %	1—1 %
18—19	105	2—2 %	12—12 %
17—17½	9	4—44.4 %	3—33 %

In this small series there were then six patients who showed some pelvic inlet disproportion (2.7 per cent.). The percentage of contracted inlets was much greater than this, but at labor there proved to be only 2.7 per cent. of disproportion. Of these six patients, four had abdominal Cesarean Sections, one a pubiotomy, and one craniotomy. There was one maternal death, due to embolism following the pubiotomy. The only fetal death was due to the craniotomy.

It will be observed that this series includes no cases with such marked pelvic contraction that one could definitely determine in advance that an operative delivery would be necessary. These patients were nearly all primipara. If the patient has had a previous labor the history will be an important guide. In a primipara the degree of contraction should be decided to warrant a delivery without a test of labor. It is the patient with doubtful proportion, the so-called "border-line case," that requires a test of labor, and by the test of labor we mean such management that the hazards of a subsequent operative delivery will be reduced to a minimum.

INFECTION THROUGH VAGINAL MANIPULATION.

About the middle of the last century Semelweiss and Holmes laid the foundation of our present ideas of puerperal fever. Since then various teachings for its prevention have been brought to us. First we were advised chemical disinfection, then mechanical cleansing plus disinfection and finally the boiled rubber glove. In recent years we have been taught one more point—namely—that a vaginal examination which might be without harmful result if the patient were delivered normally, might be the cause of disaster if the patient were subsequently delivered by abdominal Cesarean Section.

Some years ago Routh published the statistics for Cesarean Section in the British Islands. These showed that the mortality from Cesarean Section was about in direct proportion to the amount of vaginal manipulation preceding the operative delivery. In cases not examined the mortality was very low. The most disastrous results followed Cesarean Section on patients whose delivery had previously been attempted by either forceps or version. In such cases the high mortality was due to infection. The statistics showed moreover that the mortality increased with the length of labor preceding the delivery. Also the early rupture of the amniotic sac added greatly to the mortality.

These observations must be kept in mind when we allow a patient with a moderately contracted pelvis to go into labor. It means first of all rigid asepsis. This means not only careful cleansing of the hands of the obstetrician, but also unusual care in the preparation of the patient. Shaving is preferable to clipping, and careful cleansing is necessary. Since most vaginal examinations are for the convenience of the physician instead of the patient's welfare, they should be scrupulously avoided. Any examinations required for convenience can be made per rectum. By rectal examination one can readily learn, after a little experience, the condition of the cervix, the nature of the presenting part, and the progress of descent. Since early rupture of the membranes adds to

the hazard of a subsequent Cesarean Section, care should be observed not to cause an accidental rupture.

In most cases one can judge fairly early in labor as to whether the head will engage. As to how long one should allow the test of labor to proceed it is rather hard to say. In a given case if there is any slight evidence of descent, additional time should no doubt be allowed before determining the absolute necessity for surgical delivery. On the other hand if at no time there is any engagement, and the presenting part floats on the brim of the pelvis, additional time is probably unnecessary. As shown by Routh an excessive length of labor increases the danger of a subsequent Cesarean Section. However, the writer is of the opinion that as long as vaginal manipulation is avoided the patient is fairly safe, and the danger from increased length of labor is at least offset by avoiding a Cesarean Section in many cases.

1013 David Whitney Bldg.

COUNTRY SURGERY IN A COUNTRY HOSPITAL.

DR. W. J. HERRINGTON, F.A.C.S.

BAD AXE, MICHIGAN.

In the last few years, hospitals have been established in many of the smaller towns of the State. I hope that a short account of the work done in one of them may justify its existence and interest the members of this section. The Hubbard hospital began with ten beds; at present an enlarged building provides room for thirty patients. The rooms are large, airy, and well furnished. It contains quarters for the nurses and other help, is steam heated and otherwise fairly well equipped.

Our operating room is small, and the operations are done with, besides the anaesthetist, one assistant and one nurse, who is responsible for the sponges and the condition of the operating room. The most frequently performed operation is that for appendicitis. Up to

January 1st of this year, we had 298 acute cases with four deaths. One died of portal thrombo-phlebitis, one from pneumonia, and one from a perforating ulcer of the stomach. This last was in a child of six. Of recurrent cases, there were 339 with two deaths, one from nephritis and one from portal-thrombo phlebitis.

Of gangrenous cases, with more or less pus in or about the appendix quite often not enclosed by adhesions, there were 101, with twelve deaths. Every case, with the exception of three or four moribund on admission, was given the chance an operation afforded.

In all there were 738 cases with eighteen deaths, a mortality of a little less than 2½%. I think that every one of these deaths were preventable by a timely operation. In our community the fatal delay is more apt to be due to the physician being called too late, rather than any fault on his part. In one case the appendix and ascending colon were on the left side, while curiously enough, the pain and tenderness were in the usual place. In another, a child of five the appendix did not seem sufficiently diseased to account for the symptoms, and further exploration revealed a gangrenous Meckel's diverticulum. In a similar case in a girl of twelve, an ovary was found so twisted on its pedicle that its circulation was completely shut off. Two cases of purulent pleurisy developed after operation in pus cases. One left the hospital in a week, before I could find the source of her trouble. Two weeks later I found her chest full of stinking pus. This was evacuated but too late to save life.

The other recovered after prompt operation. Obstruction of the bowels developed once. Enterostomy was done, the bowel washed with saline, and left full of the same. The fistula closed spontaneously in a few weeks. Of hernia we have had 150, of which fourteen were strangulated. All recovered except one, who died suddenly, apparently of pulmonary embolus as he was about to go home. One of the strangulated cases was in a child of six weeks. In this connection, I may state that some years ago I operated on a strangulated hernia in a

*Read before State Medical Society at Battle Creek, 1918.

woman of ninety-four who recovered to live for seven years after.

On the uterine adnexa there were 186 operations, with one death in a case of pyosalpinx. One case had previously been operated on by Prof. Angus McLean for a tumor of the right ovary which the pathologist pronounced malignant. I saw her about a year after with a large growth of the left ovary. The cyst was adherent to every thing in reach, and the intestines and portions of the parietal peritoneum covered with a jellylike or colloid mass. It was removed with great difficulty, but the patient is still alive with no signs of return.

There were eighty-five cases of gallbladder disease, in most of which stones were present with a mortality of eight; altogether too large. In explanation, all were cases of long standing, accepting operation as a last resort. Three died of uncontrollable vomiting, that began as soon as they came from the anaesthetic, one jaundiced case died of hemorrhage that began one week after operation, and the rest as a result of operation in debilitated and aged persons.

In one, reoperated on account of a return of symptoms, a fibrous growth was found on the stumps of the cystic duct, removal of which has resulted in a relief of the trouble.

We have had nineteen cases of ectopic gestation with nineteen recoveries. I have seen three strong women in the prime of life die from internal hemorrhage while waiting for a more opportune time to operate. In view of these facts, it seems almost a crime to pursue the policy of watchful waiting advocated by many in these desperately sick patients. I may say that most of my cases have been operated upon, in private homes, many in the middle of the night, with poor light as it would have been too dangerous to remove them to the hospital, and with results equally good.

Vaginal hysterectomy has been done thirty-nine times with no mortality; abdominal forty-seven times with two deaths. One, a large fibroid died from exhaustion from persistent vomiting; the other was caused by infection in the course of removal of a large gangrenous

fibroid. There have been twenty-one cases of intestinal obstruction, with six deaths. Most of these were due to bands from old inflammatory conditions, one to a coil of intestine becoming folded around a Meckels' diverticulum, two to intussusception in infants of six months, one of which recovered. I have done three Cesarean Sections, the mothers and babies doing well.

Gastroenterostomy has been performed fifteen times with one death. This was in a case of malignant disease where it was impossible to do the retrocolic operation, and the union gave way at the end of a week. In ulcer of the stomach with stenosis of pylorus the results have been very satisfactory; as a palliative, in malignant disease, I think there has been enough relief given to justify the operation. Twice, gastrostomy has been done; once for a cancer of the oesophagus. The patient fed herself through a tube, and lived in comparative comfort for a year and then died suddenly from hemorrhage from an eroded carotid. The other was sent in as a case of bowel obstruction. I found the abdomen tremendously distended, and the patient suffering intensely. The stomach tube gave no relief either before or after section. On incision the intestines were pushed out of the abdomen, and on inspection, it was found that the abdominal cavity was practically filled by the distended stomach. On account of the precarious condition of the patient, I incised the stomach, stitched in a tube, intending in a few days to reopen and try to relieve the cause of the trouble. But on clamping the tube and giving food, it was properly taken care of. The incision closed promptly and he has remained well so far. There have been twenty goitres, four of which were cystic, eight exophthalmic and the remainder simple causing distress from their size or position. One exophthalmic case died of pneumonia ten days after operation. The ascending colon, with a part of the transverse, was resected for cancer in a woman of sixty; also the splenic flexure and descending colon for malignant disease. The divided ends were closed and side to side union made in

each case with a fairly smooth recovery. There have been three of perforated-ulcer of the stomach with two recoveries. The last case I will cite is one illustrating the ill results of haste and over-enthusiasm in the use of forceps in obstetrics. A young man called on me about one month after the birth of his first child and told me his wife had been "busted." Examination showed that he had told the truth literally. I found a large hole in the bladder, and a complete laceration of the perineum. Fortunately both healed perfectly after a reparative operation.

In all there have been 1266 abdominal operations with forty-five deaths, a mortality rate of about 3.5% and 3069 operations ranging from amputation of finger to excision of pylorus with seventy-three deaths a trifle over 2%. No one has been refused operation if there seemed a chance to give relief or save life.

A SIMPLIFIED METHOD OF ASPIRATING GASTRIC CONTENTS IN HYPERSENSITIVE PATIENTS.

CHARLES D. AARON, Sc.D., M.D.,

Professor of Gastroenterology in the Detroit College of Medicine and Surgery.

DETROIT, MICHIGAN.

The various methods of obtaining the stomach contents, or such portions thereof as may be necessary for purposes of examination, may be conveniently divided into simple and complicated. No one will gainsay the fact that in any mechanical process, undertaken for any purpose whatever, a simple method is preferable to a complicated one, provided the results obtained are equally good. It is also acknowledged that overcoming difficulties without complicating the means employed constitutes an improvement. The third point in this connection is that such improvement is still greater, if the very presence of certain difficulties is actually turned to profitable account for the purpose of overcoming them; and the climax of that achievement is reached when such a desirable result is attained by a still greater simplification of the hitherto simplest means.

If these facts admittedly hold good in a general way for any device or discovery, they apply with particular force to the withdrawal of the gastric contents, a procedure which with some sensitive patients amounts to a veritable ordeal. It is the simplification of the process in conjunction with the other advantages I have just touched upon that I propose to place at the disposal of the physician.

It is generally conceded that the so-called "expression method" of Ewald and Boas, the details of which I need not here reiterate, is considered one of the simplest and best. And yet there are a number of contingencies in which the method fails or is superseded by others. And let it be understood that these other methods merely aim at palliating the difficulties, not at removing them, much less turning them to profitable account.

In dealing with the difficulties the physician encounters in removing the contents from the stomach of hypersensitive patients—and only these need be seriously considered in this connection—I may begin with nausea and retching as one of the greatest obstacles to the successful performance of the task. These patients become nauseated at the mere sight or thought of the stomach tube. The very act of cocaineizing the posterior buccal wall, which some authors advocate to overcome this unpleasant feature of the proceedings, conduces to the production of retching and is by no means willingly tolerated by this class of patients. Some authors, indeed, go so far as to advise abandoning any attempt at introducing the tube in patients with pronounced retching tendencies, dispensing with this method of examination altogether rather than subject such patients to the ordeal.

It is upon this phase of the question that I have principally concentrated my attention. It is evident that the apprehensions of sensitive patients can not be entirely allayed by persuasion, tact, or skill. The question then arises: Can the unavoidable unpleasantness and inconvenience be shortened, and how? The answer is that it can be shortened and minimized by introducing the tube less deeply—in

fact by not allowing it to enter the stomach at all, and yet obtaining a quantity of gastric contents sufficient for chemical and microscopic analysis.

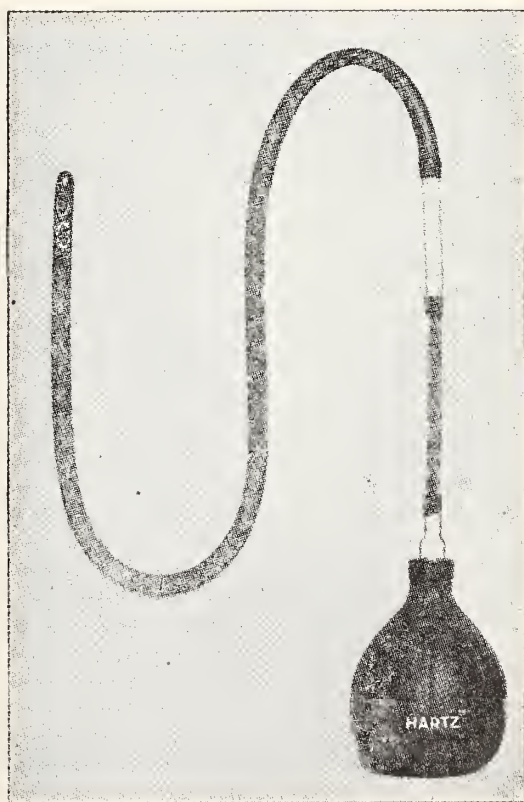
In devising this process, I have been guided by a consideration of the anatomic fact that the lower third of the esophagus is normally distended, forming a continuous open lumen. As soon as the stomach tube reaches that part, the cardia, following the law of contrary innervation, becomes relaxed, and as a result the gagging and retching of the patient induces a regurgitation of some of the gastric contents into the esophagus, where the fenestrated end of the stomach tube is ready to receive it, and whence it is promptly aspirated by the atmospheric vacuum action of the terminal rubber bulb. Thus it is quite unnecessary for the tube to enter the stomach, and the greater the gagging and retching of the patient the easier it is to obtain a sample of the gastric contents.

This arrangement also overcomes what has long been considered another difficulty, namely, an abnormally low position of the stomach, where the tube can not reach the surface of the gastric contents. The reflex effect of the irritation of introducing the tube beyond the tracheal bifurcation causes the contents of the stomach, however low, to regurgitate into the esophagus through the relaxed cardia and thus obligingly meet the receptive stomach tube half way.

This highly satisfactory and desirable result can not, however, be accomplished with an ordinary stomach tube, such as are generally employed. My tube, (Fig. 1) as described in the *Journal of the American Medical Association* of November 20, 1915, is peculiarly adapted to meet the requirements. It is made of soft rubber, and, although readily flexible, is rigid enough, owing to its size and the thickness of its walls, to avoid all danger of coiling or kinking in the pharynx or esophagus. It is 32 inches (84 cm) long, and in its lower end, smooth and rounded, is embedded a piece of solid lead. This weighted end is its main distinguishing feature, and facilitates passage down the esophagus, without requiring the act

of swallowing or any other effort on the part of the patient. Kinking or coiling of the lower end of the tube in the esophagus, which in other tubes effectually prevents the withdrawal of the stomach contents, can not occur, and thus the disagreeable necessity of withdrawing the tube and making another effort at a more successful introduction is avoided.

The lower end is made solid so that particles of food can not accumulate there and occlude the tube, which is an occurrence of annoying frequency in other tubes. There are two lateral openings, one about 2cm. from the end and the other just above it on the opposite side, which run obliquely upward and are made perfectly smooth in the molding process, forming so-called "velvet-catheter-eyes." Thus, there being no sharp edges, any traumatism or other



Improved Stomach Tube.

injury to the mucous membrane from contact is impossible, and the possibility of accidental hemorrhage is entirely done away with. The openings are large, rendering aspiration of even comparatively large food remnants easy. The external end of the tube is connected with an evacuating bulb by means of a short piece

of glass tubing and a soft rubber tube about 16 cm. long.

The entire tube is less formidable in appearance than those generally used, and sensitive patients are therefore more easily persuaded to submit with good grace to its introduction, especially when they are assured that no swallowing or other effort on their part is needed or expected, and that their voluntary participation in the proceedings is simply to keep perfectly still, breathe slowly and calmly through the nose, and not take any notice of what is going to happen.

The instant that retching occurs, the aspirating bulb performs its part of the work, the tube is withdrawn, and the ordeal is over. Even the most apprehensive patients are astonished at the slight amount of inconvenience they experience and are quite ready to have the performance repeated on subsequent occasions, should it be necessary.

It now remains to describe the technic of handling the tube—which, as may be gathered from the above details, is the simplest. The bulb is compressed, and a bend in the soft rubber tube, held with the thumb and index finger of the left hand, prevents the entrance of air. The physician, standing in front of the sitting patient, whose head is inclined slightly forward, moistens the free end of the tube with cold water and passes it directly to the posterior pharyngeal wall, which guides it toward the esophageal entrance. Now the

weight in the end of the tube exerts its effect by gravitating down to the laryngopharyngeal opening, where it stops; a gentle push will then help it over the cricoid cartilage, allowing it to glide down the esophagus. At this juncture, or as soon as the tube reaches the lower esophagus, retching will occur in hypersensitive persons. The soft rubber connecting tube is then released, and the terminal bulb, regaining its natural expanded form, aspirates sufficient gastric contents into the tube for analytic purposes.

In exceptional cases it may happen that the muscles of the neck contract spasmodically, holding the tube tightly and thus preventing its downward journey. In these rare instances the patient must certainly be instructed to swallow, which will overcome the resistance, but in the great majority of cases no such resistance will be encountered.

It will be remembered from the foregoing that the correct position of the sitting patient is with his head bent slightly forward. This not only facilitates the passage of the tube through the pharynx into the esophagus, but also prevents it from accidentally entering the larynx, an occasional deplorable mishap.

With all these advantages I hope to have suggested a true simplification of a process which, in hypersensitive patients at least, has often been a disagreeable, difficult and sometimes even impossible task, not altogether devoid of danger.

812 Kresge Building.

Let the Reader Know.—In the latest issue of the American Journal of Syphilis appears an article by J. Sheridan Baketel, "On the Use of American-Made Salvarsan," which is in effect a puff for Metz's Arsphenamine. The reader is informed that Dr. Baketel is Professor of Preventive Medicine and Hygiene and Lecturer on Genito-Urinary Diseases and Syphilis in the Long Island College Hospital; Genito-Urinary Surgeon to the House of Relief of the New York Hospital; Major, Medical Reserve Corps, United States Army. The reader is not told, however, that Dr. Baketel is or was until quite recently in the employ of the A. H. Metz Laboratories (the present name of the Farbwerke Hoechst Co.) and has for some time been the

manager of the pharmaceutical department of that concern (*Jour. A.M.A.*, August 24, 1918, p. 664).

Chloramine—T, Squibb.—A brand of chloramine—T which complies with the New and Non-official Remedies Standards. For a description of the action, uses, dosage, and chemical and physical properties of chloramine—T see New and Non-official Remedies 1918, p. 156. E. R. Squibb and Sons, New York.

Chloramine—T Surgical Paste—Squibb.—It contains chloramine—T, 1 Gm., in 100 Gm. of a base composed approximately of sodium stearate, 15 per cent., and water, 85 per cent. E. R. Squibb and Sons, New York.

The Journal
OF THE
Michigan State Medical Society
ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

A. L. Seeley, ChairmanMayville
E. W. TolesLansing
R. S. BucklandBaraga

Editor and Business Manager
FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
On Leave of Absence on Duty
Medical Reserve Corps, U. S. A.
GERRIT J. WARNSHUIS, M.D.
Acting Representative Publication Committee.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Gerrit J. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.
The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

Entered at Grand Rapids, Michigan, Postoffice as second class matter.
Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 26, 1918.

October

Editorials

MEDICAL EDUCATION.

The setting of educational requirements for medical men by State Boards of Registration and the Association of Colleges has for its purpose the accomplishment of two ends. In the first place it tends to limit the number of practitioners, and, in the second place, it assures the public that those licensed to practice are informed on the best methods that the science and art of the present day permits. That the number of doctors in this country is being rapidly reduced, is shown by the marked difference between the total loss each year due to deaths and the increase brought about by new registrants. Up to the year 1904 when medical colleges flourished wherever sufficient cadavers could be collected to maintain an anatomy laboratory, it mattered little if the restrictions put upon medical instruction became too severe or the requirements too high. The public would not have suffered for a lack

of doctors if the colleges had suspended activities all together. The classification of colleges by the A. M. A., however, has done much to change this situation. The elimination of so many colleges providing inadequate preparation for the practice of medicine was also aided very largely by the magnificent donations to many of our leading universities which made it possible for them to offer advantages so far superior to the schools established for profit that competition alone drove many of them out.

An attempt is now being made to put these restrictions to the practice of medicine and the requirements of medical colleges on a definite basis. Such a basis may be one of two kinds. The first resolves itself into a question of how high can we place these requirements without creating an insufficient number of doctors to fill the public need. This is the one toward which we have been working. With the great need for medical men brought on by the war another view-point has established itself and the problem now resolves into a matter of reducing the requirements to a minimum that will produce as many doctors as possible and still make them safe and competent according to modern standards.

When scrutinized in the cold light of efficiency and actual results attained, the practical man will find many faults in our present system of developing doctors. Few of the men who are now practising successfully will deny that a great deal of the material that was crammed into them during the school days has been utterly worthless and amounts to so much gibberish. This applies not only to the pre-medical years in which the student becomes acquainted with the sciences that help in the understanding of medicine and in which he acquires the habits of study and mental culture necessary for a physician, but it is equally true of the medical course.

The fault does not lie so much in the nature of the subjects chosen for study nor sequence of the courses although the authorities in our colleges seem to devote their attention mostly to these considerations.

A big step forward will be made by our colleges when they begin to eliminate the superfluous from these courses and give more thought to rock bottom essentials. Of what good is it to a student if he can name all the points of the petrous portion of the temporal bone and yet doesn't know the course of the musculospiral or the position of the antrum pylorus?

In a recent examination of medical graduates scarcely any of them could give a correct list of the pus forming bacteria or describe the preparation of an autogenous vaccine. We dare say, however, that few of them would have hesitated to tell what connection Weichselbaum or Frankel have to bacteriology or to have given the dates when the diphtheria and mouse bacilli were discovered.

The student spends several hours a week for a large part of a school year in a bacteriology laboratory. What does he get out of it? He makes a lot of slant cultures and stains and agar plates and dumps them out. What does that get him? Familiarizes him with methods—puts him in actual contact with the organisms. For this he spends hours and hours of his time that he is supposed to apply to learning about the human body and how to cure it of its ills. At the end of it he doesn't even know what organisms are not pus producing and it is doubtful if he can even do a sputum examination. Germs cause disease and, therefore, a student should spend many precious moments playing with them and making drawings of them. By the same token sun-light sometimes causes prostration and, therefore, we should have a laboratory for the study of ultra-violet and infra-red rays and perhaps a little astronomy would be fitting. We forget that we are making doctors not bacteriologists nor chemists nor any other kind of specialists.

We are not singling out bacteriology because it is the only course at fault. It perhaps is the most flagrant example of the academic extremes to which our colleges go in attempting to provide a broad scientific foundation for medical students but the same intrusion of unessential study and labor can be found in

other branches. The criticism applies also to the teaching of the specialties. He is not interested in the technic of operations that require years of special training. What he does want to know are the indications and the simpler methods of examination that he can apply himself.

The departments of medical colleges should be in charge of men who themselves have been successful practitioners. They alone know what part of anatomy and physiology, etc., is necessary for the future doctor to be informed on. They may omit some of the details of electrolytic dissociation but they are sure to drill in the plain facts that make a man understand his cases.

There should be an hour or two given to gymnastics every day. We would not go to the extreme that some advocate in barring a man from college if he cannot pass a physical examination. Some of our most brilliant lights, notably Janeway and Young and Wm. James, would have been kept out had such a rule existed. Nevertheless, every man is plainly more efficient if his muscles are kept hard and firm and his thorax is fully developed. Such exercise and care of the body is all the more necessary when we consider that most medical students are in the most formative periods of their lives. Furthermore, physical exercise is recognized as a most wholesome influence on morality.

Thus far, we have said nothing about the pre-medical requirements nor the proposed fifth year. We will but briefly refer to an address on the former subject given by MacCracken of Detroit before the American Association of Colleges. MacCracken has two criticisms to make on the present requirements. In the first place, he cited numerous instances where the requirement of credentials showing a definite minimum of hours spent on certain subjects, particularly college physics, has worked hardship on men who otherwise could easily qualify by examination.

His second criticism is directed against the nature of the subjects required. He found by personal investigation that a great many well

educated and successful practitioners were opposed to the requirement of college physics, which is largely mathematics, and of a year of foreign language. The majority recommended a review of elementary physics and more chemistry. The present requirement of English was approved.

The old academic courses in dead languages and Gothic English and similar ones that had chiefly for their purpose the exhibition of the fact that the student had the money and leisure to spend on something useless finds little place in a profession calling for high scientific attainments. Our objection to this kind of study is not that it is not good but that there are so many things better and vastly more important to learn.

Our criticisms have not been made in a fault-finding way. We have not been blind to the wonderful achievements of our educational institutions. The facilities and equipment they offer and the high scholariness of the instructors are matters to which every American can point with pride. The fact that we need offer no apology for the work our professional men are doing alongside of Europe's best is sufficient testimony to the worth of their training. In making these remarks we are not offering personal opinions, but are expressing the view-point of the practitioners who have proof of the pudding in the eating.

WITH THE AMERICAN RED CROSS AT THE FRONT.

Arm and leg wounds compose a large majority of the injuries received in battle, hence there is an enormous demand for splints—a framework upon which the injured member may rest in the most comfortable position.

Contrary to the layman's preconceived opinion of a splint, it is not a piece of wood, but, for the use of the American Army, is of steel framework with leather and felt padding. And most of them are of ingenuous invention, being far from simple affairs. The types are almost as numerous as the injuries for which they are made to aid in healing.

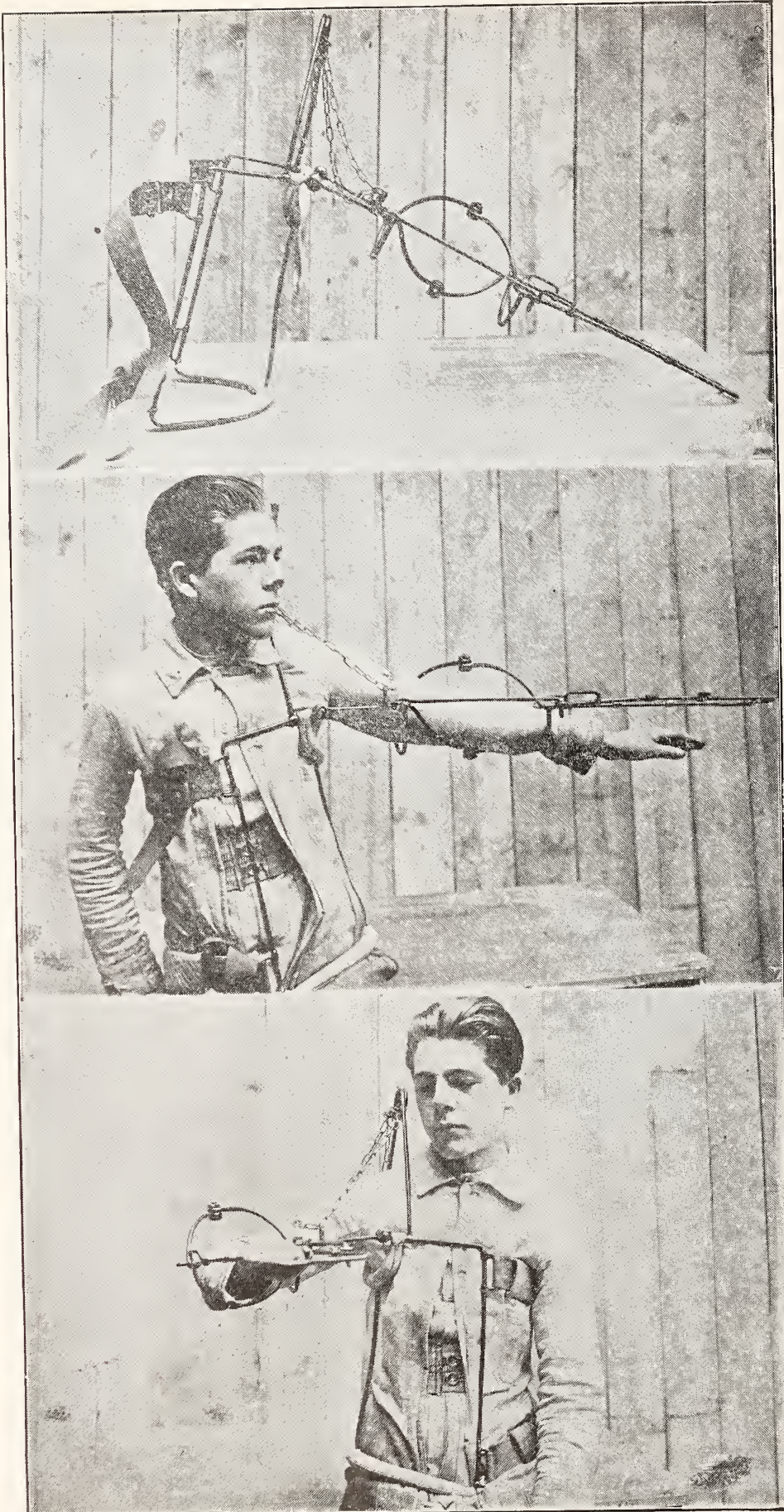
The American Red Cross has taken over the job of supplying all splints to the American Expeditionary Forces, and in the vernacular of the streets, it is "some job." The demand for these particular articles is increasing at a great rate due to the increasing activity of American troops on the battle front.

To meet this demand the Red Cross has established a splint manufacturing plant of its own in a large French town not far from the battle front.

While the splint construction is not complicated, it must be exceedingly careful and delicate. The splints that fit on the upper portion of the leg or arm must be carefully padded with felt and sheepskin. This work is done by French women and by hand.

Most of the leg and arm splints are made of steel rods bent in the shape of a U and are about four feet in length. They taper from the bottom to the top where a semi-circular steel rod, attached to each end of the U by a hinge, is padded well and attached. Upon the padded part rests the thigh or shoulder of the injured member. The wounded or broken leg or arm is bandaged between the two sides of the U. The bottom of the U is dented in order that a bandage may be attached to the bottom of the splint and the injured member for the purpose of pulling or applying the necessary weight to force the broken bones or torn muscles into place. It also serves to attach the splint to the foot of a bed or the front of an ambulance so that the wounded leg or arm may be elevated to any position which will give the greatest comfort to the sufferer.

There are numerous variations of this basic splint. Some have a hinge in the center of both sides of the U, so that an injured leg or arm may be bent at the knee or elbow and bound into position. Some have a hand rest at the end, by which the hand may be bandaged into an immovable position, so that injured muscles will not be moved by unconscious effort. Then there is the U splint with an unmovable padded steel circle at the top, which fits close to the leg or shoulder crotch. A splint of this type is also made with hinges so



The new adjustable abduction arm splint for use in base hospitals in arm fractures for the perfection of which the American Red Cross splint department has been largely responsible. The advantages of this splint are that it can be used for either arm and can be adjusted to any position.

that the arm or leg, stretched straight and fast, may be moved at the thigh or shoulder. There are small wire splints for the foot, the hand and the wrist.

All of them are made by hand in this factory, because of the lack of machinery. Even the welding and varnishing of the steel and wire, as well as the nickeling, is done in the Red Cross factory.

This is only one of the many activities from which the American Red Cross has relieved the Army. During the past few months the Red Cross has been forced to let contracts to various private manufacturers to furnish a sufficient supply of these necessary hospital appliances. But with the growth of its organization, it has established its own manufactory in the war zone of France, in order that there may be fewer transportation delays and better service in the work of relieving as much suffering as possible among American wounded.

W. D. H.

"SPANISH INFLUENZA"—A NEW TYPE OF BRONCHO PNEUMONIA.

The present epidemic of "Spanish Influenza" is imparting a somewhat peculiar experience for the profession. The term influenza has existed in the nomenclature of modern physicians for the past decade. Its use has been somewhat carelessly employed ever since 1890, when a similar epidemic swept this country. The term has been used as a handy camouflage for various types of bronchitis, rhinitis and streptococcic respiratory invasions and infections ever since the disease became pandemic in 1890.

The observant physician will have noted that during the past several years the scarlet fever and winter "grippe" epidemics are but varied manifestations of another type of this streptococci and its allied friend the pneumococcus. During the past month cultures taken from over a series of five hundred throats show findings of normal flora in two hundred throats of symptom free individuals and in the throats of some 1,000 individuals who were ill with the disease called Influenza

only the pneumococcus of type two and three and occasionally four with the hemolytic streptococcus were demonstrated. In a considerable number of additional throat cultures as well as in those previously reported upon there has in no instance, in so far as we have been able to ascertain, been revealed the *Bacillus* of Pfeifer. The question then remains a mooted one as to whether this epidemic should be termed "Spanish Influenza" in type or whether it is simply a pneumo-streptococcic invasion of the respiratory tract of an increased virulent type. The public press has undoubtedly confused the situation and intensified the hysteria by its customary sensational reports and comments. We are of the opinion that its epidemic character has resulted largely by reason of the mobilization of large numbers of troops in cantonments and in our larger cities where large audiences and crowds are accustomed to gather for this is essentially a crowd disseminated disease.

Like all other pandemics a few weeks of experience is more valuable than volumes of comments upon what one may expect to find in this so-called new entity. The description of Spanish Influenza imparted three weeks ago is not at all applicable to the disease as it is now occurring in Michigan and in some of our Southern and Western cities and cantonments. These early descriptions laid stress upon albuminuria and hematuria and some went so far as to describe symptoms of gangrene, general and localized suppurative processes and similar unusual conditions which we learn from several doctors who have been privileged to see large groups of cases and who state that these conditions were wholly absent.

One of our informants has had the opportunity of studying about fifty of the earlier cases. He realized that they had a new condition to deal with and the sudden onset, high temperatures, scarletiform eruption, coryza, the peculiar and typical pharyngeal and tonsillar inflammations, the extreme prostration and the intense back or headache with conjunctival injection all of which accompanied by a low pulse rate, chills and a facial flushing

tended to cause him to incline to the opinion that it was and is but an aggravated form of "grippe" with a predilection to pulmonary manifestation in the more severe cases. The striking finding in the early stages as compared with the later course of the disease was a "dry" chest with characteristic findings.

It was not known at that time that they were dealing with a potential broncho-pneumonia, but with accumulating experience as the number of afflicted increased the stethoscope led in the right direction for almost invariably on the third or fourth day of continued temperature elevation an area about the size of a dollar was detected posteriorly in the left apex and the right apex down to the fourth rib. With it there was elicited a sharp broncho-vesicular to tubular breathing. A similar area would be found below the angle of each scapula and coincidentally there would appear in the sputum the first streaks of blood.

In one group of twenty-seven cases seen and diagnosed, broncho-pneumonia on the second day the following results were noted: One death, six cases the symptoms subsided in from three to five days and twenty cases that pursued a true course of broncho-pneumonia. One case that ended fatally gave a type three pneumococcus while the remaining all showed type two or three and no-hemolytic streptococci. It is hoped that the laboratories of our several cantonments will make complete reports upon the type of bacteria as soon as they have had the opportunity to digest their statistics and data.

Clinically the cases can be divided into three classes:

First: The "mild cases" running a short course with sudden onset, high fever, flushed face, chest and arms, coryza, rhinitis, ringing in the ears, dry ringing cough with complete prostration and a rapid drop in temperature and amelioration of all symptoms within two to five days. The striking feature is the sudden and complete prostration and a desperate picture of acute illness that will never be forgotten by anyone who has seen a goodly number of these cases.

Second: The more severe cases with the above onset plus a marked chill, sub-sternal pain with a dry harsh sounding chest and areas of broncho-vesicular breathing in the posterior upper lobes and in which recovery occurs by lysis in seven to fourteen days. In this type as well as in the third type it is common to encounter a severe epistaxis about the third day and which persists intermittently for three or four days. There will also be found varied degrees of hyperaesthesia of the skin over the chest and abdomen.

Third: In about 20 per cent. of all those who became afflicted a true broncho-pneumonia results. The pneumonia is of a virulent type and of comparatively short course. The extensive involvement of both lungs is marked and is evidenced by the peculiar cyanosis that is noted one or two days before death occurs, while in some this cyanosis is present and striking in the very early stages of the acute onset.

Treatment is but symptomatic and as yet no definite or successful plan has been outlined. The most important thing is confinement to bed, hygiene, competent nursing, and active elimination. The use of an alkaline, the ingestion of large amounts of fluids, the use of digitalis early and ordinary stimulation is of some value. It is the conclusion of those who have passed through a large series of these cases that medication is of but little value in arresting the disease when lung involvement is demonstrated and that recovery is dependent solely upon personal resistance with competent nursing care. It is also noted that the stout plethoric individuals and those of the athletic type of young manhood fall easy victims to this disease.

We are not at all inclined to advance any definite statements regarding this epidemic for the reliable data is not available to make such comment or to offer any suggestions as to its prevention. Neither is the information at hand to comment or criticise upon the situations in cantonments or the methods by which the afflicted soldiers were cared for—that is

withheld until some future time and until then we are trusting that we will witness a critical study of the situation.

Editorial Comments

How many times, doctor, do you mention *The Journal* "ads" when dealing with our advertisers? Help us to impress on advertisers the value of their "ads" in our Journal.

The work of the State Anti Tuberculosis is deserving of the enthusiastic support of every doctor who has the interests of the public at heart. Gradually and more successfully they are bringing the public to realize the appalling loss that this scourge creates.

Some fifteen of our Detroit physicians responded to the emergency call from Camp Custer for medical assistance during the recent influenza epidemic in that Camp. These men rendered splendid service and incidently were afforded an opportunity of studying these sick soldiers' physical manifestations of the disease. During their residence in Camp they shared "bunk and chow" with the medical officers. One observant member of this group could not reconcile the attitude of the Christian Scientist Camp workers with the teachings of Mrs. Eddy. These Christian Science workers were ever alert to see that their faces were protected with a face mask to guard against bacterial infection. Evidently the "faith" is not of sufficient efficacy to guard against an attack of the "flu." Further comment is unnecessary.

The following formula used as a gargle has been satisfactorily demonstrated as being destructive to the pneumococcus. Repeated bacteriologic examination has proven its effectiveness and rendered throats free of the pneumococcus. It is a most effective gargle and is used in the strength given.

Quinine Sulphate or Bi-Sulphate, grs. VI.

Thymol.

Ol Gaultheriar.

Ol Meuth Pip. a. a. drm. I.

Aquae q. s. to Gal I.

An investigation of the promiscuous abuse of postal franking privileges and an unproductive use or rather waste of paper and labor by the National Council of Medical Defense and the M. C. V. S. as directed by Martin et. al., would be timely and pertinent. "Martinism" has created an uncalled state of con-

fusion through palpable errors and meddlesome interference with military authorities. The day of reckoning is not far distant.

The peculiar flushing of the face, the dull eye and the coincident deep cyanotic hue of the ears, lips and nose enables one to promptly detect the influenza form of the disease and differentiates it from the ordinary acute coryza and cold. Once seen it will never be forgotten.

Commence preparing for our next Loan. Systematically lay aside a definite amount of your collections for your next purchase.

If Germany and its subjects should surrender unconditionally it might be well to clean up the Mexican situation before our Army is mustered out. We have always felt that that "Mexican job" was never properly finished.

The devotion to duty of medical officers during the epidemics in our several cantonments merits particular commendation. They bent to the task unselfishly and self was forgotten in the long hours of continued administration to the sick soldiers who poured into the infirmaries and hospitals at the rate of 100 an hour during the first week of the epidemic.

Correspondence

From the War Demonstration Hospital.

October 1, 1918.

To the Editor:

A gradually increasing misconception of the Art of Anaesthesia has led to a rather unique condition of affairs.

We find that nurses and other lay persons may, by the simple acquisition of a few rules, become anaesthetists. Large institutions have adopted the nurse anaesthetist upon grounds of economy, expediency and even sentimentality. It is argued that these workers can be employed at little expense, that the supply meets the demand and that the feminine element eliminates fear and works for smoothness during the induction of the anaesthesia.

These institutions may employ lay persons to take their X-ray pictures and to make urinary, blood or sputum examinations but does any one dream of speaking of these workers as the hospital Roentologist or the attending Pathologist? They are employed as technicians. The nurse who administers an anaesthetic is an anaesthetic technician. She can never be more without a Medical degree for

in order to understand the language of anaesthesia one must have intimate acquaintance with anatomy, physiology, medicine, surgery, diagnosis, psychology and special branches.

The nurse who in discussion with a medical man attempts to defend a theory relating to anaesthesia can not fail to feel the presumption of it and, if graced with wit, to see the absurdity of such a position. Yet it has actually come to pass that medical men have suffered themselves to be instructed by a nurse in the theory and practice of anaesthesia.

In justice to an important branch of surgery and to our medical confreres who devote their training and their energy to its development let us drop the term Anaesthetist as applied to its non-medical workers and adopt the term Anaesthetic Technician

Paluel J. Flagg.

Deaths

Dr. J. A. Ferguson died at his home in the Soo, Chippewa County, October 4, 1918. Dr. Ferguson was a leading and highly respected member of his community. He was a graduate in Arts from McMaster University, Toronto, in 1897 and graduated from the same school in Medicine in 1903. He acted as surgeon for

the Chippewa and Edison Sault Electric companies and the Minneapolis, St. Paul, and Sault Ste. Marie Railroad. Although in ill health, he served on the district draft board as long as his condition permitted. He was a member of the Chippewa County Medical Society.

Dr. Carl Sears, age 37 years, died at his home in Quincy, Michigan, October 13, 1918. He was a member of the Branch County Medical Society, and very highly esteemed by his colleagues.

State News Notes

The ninth annual meeting of the Clinical Congress of The American College of Surgeons scheduled to be held at New York, October 21-25, has been canceled, owing to the influenza epidemic.

Dr. Garner M. Byington, of Charlotte, has been appointed a member of the Michigan State Board of Health.

Be an Unconditional American and buy your share of Liberty Bonds.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

BAY COUNTY

The Bay County Medical Society met September 16, 1918, at the residence of Dr. T. A. Baird, Bay City. Drs. W. R. Ballord, Wm. Kerr and others discussed the subject of "Soldier Examinations."

CLINTON COUNTY

The Clinton County Society held a regular meeting, October 3. Dr. Carl V. Wheeler of the University of Michigan, gave an illustrated talk on the effects of poisonous gases used in warfare.

The following officers were elected: President, Dr. W. N. Taylor; Vice-President, Dr. Ernest Scherer; Secretary and Treasurer, Dr. C. T. Foo; Delegate, Dr. F. E. Luton; Alternate Delegate, Dr. E. L. Martin.

EATON COUNTY

The Eaton County Medical Society met on Thursday, October 3rd, at Eaton Rapids. Dr. E. L. Eggleston of Battle Creek gave a lantern slide lecture on Peptic Ulcer.

KALAMAZOO COUNTY

The Kalamazoo Academy of Medicine held a regular meeting October 8, 1918, at the Park-American. Capt. J. G. Taylor, of Camp Custer, conducted a Heart Clinic.

WAYNE COUNTY

The Wayne County Society held a general meeting, October 7, at which Major Geo. E. McKeane, who has recently returned from France, related his

impressions of Medicine and Surgery in France.

A regular meeting was held on October 14. Dr. D. O. Donovan reported three cases of paralysis. Drs. David Inglis and Jos. Andries discussed his paper. Dr. Wm. M. Donald read a paper on "Spanish Influenza." The paper was based on an intensive study of two weeks on the New England Coast in hospitals, camps, and private homes.

The new officers were installed at a regular meeting of the Wayne County Society, September 23. Dr. Jno. Bell succeeds Capt. Clarence Simpson as President. Dr. Ray Andries remains as Secretary. Dr. Wm. Morley holds the office of Treasurer.

Book Reviews

CLINICAL DIAGNOSIS. By Jas. C. Todd.

This manual has gone through four editions and we must, therefore, concede to it a well-affirmed popularity. A good deal of the favor with which it is met, may perhaps be accounted for by the fact that the author is a teacher of long experience who has been conscientious enough to painstakingly study the needs of his students and adapt his teaching to them.

A book like this, intended for the use of the medical student should be more explicit and should confine itself more to description of technique and actual working difficulties than to significance of tests. It is far more valuable when it reflects a decidedly personal viewpoint.

The student can not get a very practical laboratory training from reading second hand description of classical methods that the author himself, modifies or disregards. In the few hours allotted to him for this work he may be well content if he learns one way of doing a thing, regardless of how many others there may exist. This is not ideal nor does it tend to cultivate originality but it is highly practical.

It is well enough for a laboratory expert to make a study of different methods, but in a medical text book he should be content to describe the particular methods he practices and to point out the errors and difficulties that an inexperienced man will fall into.

SURGICAL TREATMENT by James Peter Warbasse, M.D., in three volumes with 2,400 illustrations. Published by W. B. Saunders Co., Philadelphia and London.

There are many features about this work that commend it to the practicing surgeon. Descriptions of methods employed and technique are lucid and

full. The entire field of surgical treatment is exhaustively covered. While the illustrations are profuse they are well chosen.

Miscellany

VACCINES IN INFLUENZA.*

*From Editorials in the Journal A.M.A., October 19, 1918.

With the appearance of the epidemic of influenza, reports began to appear, chiefly in newspapers, as to new serums, vaccines, drugs and other methods for checking and even for curing the disease. A few samples of such as have come to The Journal appear in our Tonics and Sedatives Department this week. In Massachusetts, Commissioner E. R. Kelly appointed two committees to investigate the value of influenza vaccines as a preventive agent and as a treatment of the disease. The first committee, a special board for scientific investigation, consisting of Dr. M. J. Rosenau, chairman, and Frederick P. Gay and George W. McCoy, was appointed to consider the evidence available on the prophylactic and therapeutic use of vaccines against influenza. This committee presented the following conclusions:

1. The evidence at hand affords no trustworthy basis for regarding prophylactic vaccination against influenza as of value in preventing the spread of the disease, or of reducing its severity. The evidence from the present epidemic, though meager, suggests that the incidence of the disease among the vaccinated is smaller than among the nonvaccinated. The board, therefore, concludes that further experimental evidence should be collected.

2. The evidence at hand convinces the board that the vaccines we have considered have no specific value in the treatment of influenza.

3. There is evidence that no unfavorable results have followed the use of the vaccines.

The second committee, known as the Special Board of Statistical Investigation, consisted of Dr. George C. Whipple, chairman, William H. Davis and F. C. Crum. This committee reported:

1. The weight of such statistical evidence as we have been able to accumulate indicates that the use of the influenza vaccine which we have investigated is without therapeutic benefit. Exceptional cases where apparent benefit has resulted from the use of the vaccine can be matched by other cases where similar recoveries have been made without vaccination.

2. The statistical evidence, as far as it goes, indicates a probability that the use of this influenza vaccine has some prophylactic value.

3. There is also some evidence in the effect that other methods of protection, such as open-air treatment and the use of proper masks, are effective in protecting exposed attendants, and the use of vac-

cine should not be taken as an excuse for omitting such safeguards.

As a result, the following recommendations were made:

That the State encourage the distribution of influenza vaccine intended for prophylactic use, but in such manner as will secure scientific evidence of the possible value of the agent. The use of such vaccine is to be regarded as experimental.

That the State shall neither furnish nor endorse any vaccine at present in use for the treatment of influenza.

These reports are conservative, and offer to other health commissioners and their communities a reliable guide as to procedures that should be adopted before subjecting or trying out on the public any method of prevention or treatment that may be offered. These matters are the domain of medical science, and medical scientists of recognized ability should be called on to make the decision.

To settle any doubts that may exist as to the status and authority of the V. M. S. C. we reprint from Journ. A.M.A. the following:

To the Editor: Desiring information for my own guidance in making selection of physicians for appointment as examiners on Local Boards and Medical Advisory Boards, I made inquiry of the Provost Marshal-General's Office in reference to the use, if any, he had directed should be made of the Volunteer Medical Service Corps. His reply may be useful to medical aides and others, and I send it to you for publication with the sanction of General Crowder.

John M. Dodson, M.D., Chicago.

General Crowder's letter says in part:

* * * the Provost Marshal-General has had no thought of employing the Volunteer Medical Service Corps, as an organization, for any purpose, nor has any need for its aid arisen. On the other hand, many of its members have doubtless been utilized, individually, in the physical examination of drafted men. The medical profession has given most earnest and whole-hearted support to the work of the Selective Service, and no unofficial intermediary is required between its members and the Provost Marshal-General.

F. H. Crowder, Provost Marshal-General.

BRITISH STATISTICS IN THE REGISTRATION AREA OF THE UNITED STATES: 1916.

Washington, D. C., Oct. 28, 1918.—In the recently established birth-registration area of the United States—comprising the six New England states, New York, Pennsylvania, Maryland, Michigan, Minnesota, and the District of Columbia, with an estimated population of 33,000,000, or about 32 per cent. of the total population of the United States—818,983 infants were born alive in 1916, representing a birth rate of 24.8 per 1,000 population. The total number of deaths in the same area was 486,682, or 14.7

per 1,000. The births thus exceeded the deaths by more than 68 per cent. For every state in the registration area, for practically all the cities, and for nearly all the counties, the births exceeded the deaths, usually by substantial proportions. The mortality rate for infants under one year of age averaged 101 per 1,000 living births. The foregoing are among the significant features of the report, "Birth Statistics in the Registration Area of the United States: 1916," soon to be issued by Director Sam L. Rogers, of the Bureau of the Census, Department of Commerce, and compiled under the supervision of Dr. William H. Davis, chief statistician for vital statistics.

Comparison With 1915.

The birth rate for the entire registration area fell below that for 1915 by one-tenth of 1 per 1,000 population; while the death rate exceeded that for 1915 by seven-tenths of 1 per 1,000. The excess of the birth rate over the death rate for 1916, 10.1 per 1,000, was thus a little less than the corresponding excess for 1915, which was 10.9 per 1,000. If the birth and death rates prevailing in the later year were to remain unchanged, and if no migration were to take place to or from the area to which they relate, its population would increase annually by about 1 per cent. This rate, compounded for a decade, would yield a decennial increase of a little more than 10 per cent., or about half the rate of increase in the population of the country as a whole between the last two censuses, 21 per cent.

White and Colored.

Of the total number of births reported, 799,817, or 24.9 per 1,000, were of white infants, and 19,166, or 22.8 per 1,000, were of colored infants. The death rates for the two elements of the population were 14.5 and 24.4 per 1,000, respectively. The deaths reported for the colored races (comprising all nonwhites) thus exceeded the births reported; but it is probable that the registration of births is less nearly complete among the colored than among the white population, and that therefore the rate shown for the former class is too low, whereas in the case of the death rates there is probably not so great a margin of error.

Native and Foreign Mothers.

Some indication of the fecundity of the native and foreign elements of the population may be obtained from a comparison between the proportion which the number of white foreign-born mothers formed of the total number of white foreign-born mothers to whom children were born in 1916, and the proportion which the white foreign-born married women, aged 15 to 44, formed of the total number of white married women of corresponding ages in 1910.

From the table following, it appears that many more births occur to white foreign-born women, proportionately to their number, than to native women. In Connecticut, approximately 46 per cent. of white married women aged 15 to 44 in 1910 were of foreign birth, but about 62 per cent. of the white mothers to whom children were born in 1916 were natives of foreign countries.

State.	1916. Per cent. which foreign-born mothers formed of total white mothers.	1910. Per cent. which foreign-born married females, 15 to 44, formed of total white married females, 15 to 44.
Connecticut	61.63	46.36
Maine	27.23	21.89
Maryland	14.82	13.11
Massachusetts	56.32	48.87
Michigan	32.80	26.45
Minnesota	26.80	33.99
New Hampshire	41.69	32.69
New York	52.84	42.71
Pennsylvania	37.65	27.77
Rhode Island	57.37	49.94
Vermont	24.04	18.11

Infant Mortality.

The infant-mortality rate—that is, the number of deaths of infants under one year of age per 1,000 born alive—throughout the registration area as a whole was 101 in 1916, as against 100 in 1915. This is equivalent to saying that of every ten infants born alive one died before reaching the age of one year. Among the 11 states these rates ranged from 70 for Minnesota to 121 for Maryland; and for the white population separately the lowest and highest rates were 69 for Minnesota and 115 for New Hampshire. The high rate for the total population of Maryland was due to the presence of a larger colored element in that state than in any of the others, the rate for the whites alone being only 101.

The infant-mortality rates vary greatly for the two sexes and for the various nationalities.

With an infant-mortality rate of 101 for the registration area as a whole, the rate ranges for white children from 68 where mothers were born in Denmark, Norway, and Sweden, to 148 where mothers were born in Poland, while Negro children have a rate of 184. The range of rates among white males is from 74 for children of mothers born in Denmark, Norway, and Sweden, to 171 for those of mothers born in Poland, while Negro males

have a rate of 202. The corresponding rates for females were 62, 124, and 166, respectively.

States and Cities.

The following table shows, for the birth registration area, by states and by cities having more than 100,000 inhabitants in 1910, the number of births in 1916, the per cent. of excess of births over deaths, and the infant-mortality rate. Figures for the white and colored elements of the population are shown separately for those areas in which colored persons constitute more than one-tenth of the total population.

Excess of Births Over Deaths, and Infant Mortality: 1916.

Area.	Number of births.	Excess of births over deaths (per cent.)	Deaths of infants under 1 year of age per 1,000 living births.
Registration area	818,983	68.7	101
Registration states.			
Connecticut	35,351	74.2	101
Maine	16,033	32.5	108
Maryland, total	33,631	49.7	121
White	27,305	63.9	101
Colored	6,326	6.0	209
Massachusetts	93,497	65.1	100
Michigan	86,840	88.1	96
Minnesota	55,459	127.1	70
New Hampshire	9,664	35.4	115
New York	241,456	58.8	94
Pennsylvania	217,449	74.7	114
Rhode Island	14,634	53.5	111
Vermont	7,768	37.2	93
Registration cities having more than 100,000 inhabitants in 1910.			
Connecticut:			
Bridgeport	4,598	94.8	106
New Haven	5,106	100.6	88
Maryland:			
Baltimore, total	14,542	36.5	122
White	12,278	54.1	104
Colored	2,264	1—16.6	219
Massachusetts:			
Boston	19,577	53.3	105
Cambridge	2,691	76.3	91
Fall River	3,689	68.8	173
Lowell	3,287	67.6	146
Worcester	4,941	70.2	101

Area.	Number of births.	Excess of births over deaths (per cent.)	Deaths of infants under 1 year of age per 1,000 living births.
Michigan:			
Detroit	24,289	121.6	112
Grand Rapids	3,131	100.00	75
Minnesota:			
Minneapolis	8,793	95.2	82
St. Paul	5,242	87.6	68
New York:			
Albany	2,280	11.4	97
Buffalo	13,088	73.5	114
New York	137,923	77.0	93
Rochester	6,816	82.6	86
Syracuse	3,853	63.2	100
Pennsylvania:			
Philadelphia	40,360	45.7	105
Pittsburgh	16,406	62.6	115
Scranton	3,623	71.5	131
Rhode Island:			
Providence	5,981	48.7	110
District of Columbia:			
Washington, total	7,201	11.2	106
White	4,979	25.3	83
Colored	2,222	12.2	158

¹ Per cent. by which births fell below deaths.

NEW AND NON-OFFICIAL REMEDIES.

Chlorcosane—Squibb.—It complies with the standards for chlorcosane, N. N. R. Chlorcosane is a liquid, chlorinated paraffin containing its chlorine in stable (non-active) combination. It is used as a solvent for dichloramine-T and is itself without therapeutic action. E. R. Squibb and Sons, New York.

Thromboplastin Solution—Armour.—An extract of cattle brain in physiological sodium chloride solution prepared according to the method of Hess. It complies with the description of Solution Brain Extract, N. N. R. As a hemostatic, the solution is applied directly to bleeding tissues or applied by means of a spray or tampon. See New and Nonofficial Remedies, 1918, p. 136 under "Fibrin Ferments and Thromboplastic Substances (Kephalin)". Armour and Co., Chicago.

Corpus Luteum Capsules, 2 Grains.—Each capsule contains 3 grains of corpus luteum—Armour (see New and Nonofficial Remedies, 1918, p. 237). Armour and Co., Chicago.

Salipyrine Tablets, 7½ Grains.—Each tablet contains 7.5 grains of salipyrine (see New and Non-official Remedies, 1918, p. 275). Riedel and Co., New York.

Antipneumococcus Serum Type 1, Gilliland.—It is marketed in vials containing 50 Cc. The Gilliland Laboratories, Ambler, Pa.

Phenylcinchoninic Acid—Abbott.—A brand of phenylcinchoninic acid, U. S. P. (see New and Non-official Remedies, 1918, p. 269). The Abbott Laboratories, Chicago.

Parresined Lase—Mesh Surgical Dressing.—Net mesh gauze impregnated with and containing from 45 to 50 per cent. of parresine (see New and Non-official Remedies, 1918, p. 247). The Abbott Laboratories, Chicago.

Halazone—Squibb.—A brand of halazone complying with the standards for halazone, N. N. R. It is marketed only in the form of Tablets Halazone-Squibb 1-16 Grain, each containing halazone-Squibb, 1-16 grain, anhydrous sodium carbonate, 1-16 grain, and sodium chloride, 1½ grains. Halazone tablets are used for the sterilization of drinking water one or two tablets being added to one quart of water. E. R. Squibb and Sons, New York (*Jour. A.M.A.*, Sept. 28, 1918, p. 1059).

During September the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Non-proprietary Articles:

BENZYL ALCOHOL.

Armour and Company:

Corpus Luteum Capsules, 2 Grains.

THROMBOPLASTIN SOLUTION—Armour.

Gilliland Laboratories:

ANTIPNEUMOCOCCUS SERUM, TYPE I.

Hynson, Westcott and Dunning:

PHEN METHYLOL—H. W. and D.

Phenmethylo Ampules, 1 per cent., H. W. and D.

Phenmethylo Ampules, 2 per cent., H. W. and D.

Phenmethylo Ampules, 4 per cent., H. W. and D.

Riedel and Company:

Salipyrine Tablets, 7½ Grains.

E. R. Squibb and Sons:

CHLORCOSANE—Squibb.

Halazone—Squibb Tablets, 1-16 Grain.

SOLARGENTUM—Squibb.

PROPAGANDA FOR REFORM.

An Italian View of the Proprietary Evil.—A Murri, professor of clinical medicine at Bologna,

protests against the way he is importuned to prescribe only made-in-Italy pharmaceuticals. He declares his unswerving patriotism, but insists that the physician's duty is to prescribe that which is best to restore the health of his patients. He holds that to elevate the pharmaceutical industry of Italy, there must be founded a supreme council of chemists, pharmacists and clinicians who will examine the made-in-Italy pharmaceuticals with the severest scientific impartiality (*Jour. A.M.A.*, Sept. 7, 1918, p. 840).

Dr. A. W. Chase's Nerve Pills.—According to the label, these pills are "used in the treatment" of "thin and watery blood, nervous disorders, brain fag, nervous headache, nervous dyspepsia, irregular heart action, sleeplessness," etc. A circular in the box calls attention to the use of these pills in the treatment of almost everything from pale, sallow complexion, to paralysis and locomotor ataxia. An analysis made in the A.M.A. Chemical Laboratory indicates that "Dr. A. W. Chase's Nerve Pills" contain iron, possibly in the form of ferrous sulphate which is in a state of more or less decomposition, manganese dioxid, aloes or aloin, vegetable extractive, and a trace of an alkaloidal drug (*Jour. A.M.A.*, Sept. 7, 1918, p. 844.)

The Patriotic Medical League in Italy.—In a recent issue of the *Unione dei Medici Italiani per la Resistenza Nazionale* of Italy, the work of the A.M.A. Council on Pharmacy and Chemistry is described in detail. The description of the work of the Council is by Dr. V. Ronchetti, physician in chief of the Ospedale Maggiore of Milan. He refers to the work of the Council to show what is being done in the United States in this line, "in a truly, admirable, simple and practical manner," and compares this with the ineffectual control of pharmaceuticals in Italy. He holds that it should not be a difficult matter to co-ordinate certain departments in Italy's universities to form the nucleus for an istituto di controllo for medicinal products—an institution which would serve as a guarantee for the sick, as a guide for the manufacturing chemists in their production, and for physicians in their application of the products (*Jour. A.M.A.*, Sept. 14, 1918, p. 918).

Eatonic.—If one believes the claims of the Eatonic Remedy Co., Chicago, "the Advanced Scientific Thought of the Medical World has been called upon to produce Eatonic!" According to newspaper advertisements, Eatonic "Instantly relieves heartburn, bloated, gassy feeling, stops acidity, food repeating, and stomach misery." From the analysis in the A.M.A. Chemical Laboratory, it

appears that Eatonic comes in the form of tablets each containing approximately 5.5 grains calcium carbonate, 15 grains sugar, 3.25 grains charcoal, with peppermint and undetermined material. Eatonic will do nothing that can not be done as well by a "sodamint tablet" (*Jour. A.M.A.*, Sept. 21, 1918, p. 993).

Campetrodin and Campetrodin No. 2.—The A.M.A. Chemical Laboratory reported to the Council on Pharmacy and Chemistry that from the advertising of the A. H. Robins Company, Richmond, Va., it appeared that Campetrodin and Campetrodin No. 2 are claimed to contain elementary (free) iodine in an "oleaginous solvent," and that the second preparation contains twice as much iodine as the first. The laboratory's examination demonstrated, however, that there was but a trace of free iodine in the preparations; that practically all of the iodine appeared to be in combination with a fatty oil, and that the second did not contain twice as much iodine as the first. Having considered this report of the analysis and the claims made for the preparations, the Council declared Campetrodin and Campetrodin No. 2 inadmissible to New and Nonofficial Remedies because of false statements as to composition and therapeutic action (*Jour. A.M.A.*, Sept. 21, 1918, p. 993).

Sugar Treatment of Tuberculosis.—Domenico Lo Monaco, professor of physiologic chemistry of the University of Rome, has studied the influence of the secretions of sugar parenterally introduced. He found that when persons with copious bronchial secretions are given subcutaneous injections of 4 or 5 gm. of sugar (saccharose), expectoration rapidly diminishes and ceases completely in many cases. It is claimed that an intramuscular injection of strong sugar solution is of considerable value in the treatment of the tuberculous in that by diminishing the bronchial secretion, it diminishes the cough and annoying night sweats. It is further suggested that the treatment will be useful in that it will decrease the amount of sputum scattered about by consumptives (*Jour. A.M.A.*, Sept. 28, 1918, p. 1083).

Carminzym Not Admitted to N. N. R.—The Council on Pharmacy and Chemistry reports that Carminzym (Fairchild Brothers and Foster) is declared to contain in each tablet approximately 32 mg. of an extract of pancreas, 50 mg. sodium bicarbonate, 172 mg. prepared chalk, 1.5 mg. powdered ipecac and "aromatics q. s." Without considering other possible conflicts with its rules, the Council held the preparation inadmissible to New

and Nonofficial Remedies because it is an irrational mixture, the use of which is detrimental to therapy. The Council explains that the employment of mixtures of pancreatic extract, alkalis, ipecac and carminatives in fixed proportion leads to slipshod treatment and tends to make the practice of medicine mere guesswork (*Jour. A.M.A.*, Sept. 28, 1918, p. 1081).

Deterioration of Argyrol Solutions.—The manufacturers of argyrol advise that argyrol solutions be made freshly when required. The need for this precaution is confirmed by a report of work which indicated that the gonococidal activity of an argyrol solution began to decrease a few days after it had been made and had decreased 75 per cent. after two months (*Jour. A.M.A.*, Sept. 28, 1918, p. 1084).

Instability of Fluidextract of Ergot.—There is some difference of opinion among investigators as to the keeping quality of fluidextract of ergot. However, it is clear that it loses its activity quite rapidly and may become inert within a year (*Jour. A.M.A.*, Sept. 28, 1918, p. 1804).

The Administration of Quinin.—From a study of the elimination of quinin in different diseases, it appears that for optimal effects it is best in most cases to give quinin every three or four hours in approximately 0.25 gm. doses, preferably by mouth except when there are gastro-intestinal disturbances, and here subcutaneous or intramuscular injection is indicated. Needless to say, the daily 2 gm. should be exceeded in cases of pernicious and primary malaria. The intravenous method should be employed in pernicious cases (*Jour. A.M.A.*, Sept. 28, 1918, p. 1086).

Two Misbranded Nostrums.—Brazilian Balm, directly or inferentially, was claimed to cure consumption, prevent lockjaw and "clear out of the system" the germs of typhoid and diphtheria. A shipment of the nostrum was seized by the federal authorities and ordered destroyed by the court.

Wright's Indian Vegetable Pills were claimed to cure yellow fever, smallpox, erysipelas, consumption, cancer, venereal disease, paralysis, epilepsy and other

conditions too numerous to mention. The Government, having seized a shipment and charged that the claims were false, the proprietors of the pills admitted the allegation (*Jour. A.M.A.*, Sept. 7, 1918, p. 844).

Bitro-Phosphate.—The A.M.A. Chemical Laboratory reports that this appears to be a five-grain tablet of calcium glycerophosphate. Since a bottle containing forty-two tablets sells at one dollar and this price is sixteen hundred per cent. greater than the cost of the calcium glycerophosphate contained therein, it is asked if this comes within the excess profit tax. The claims made for Bitro-Phosphate are those which were made for calcium glycerophosphate when it was erroneously supposed that organic phosphates were more readily assimilated than inorganic phosphates. Bitro-Phosphate is sold by the Arrow Chemical Company. E. S. Prather, the present owner of this company, has been interested, directly or indirectly, in a considerable number of questionable products and schemes (*Jour. A.M.A.*, Sept. 14, 1918, p. 921).

Chloramine—T Tablets—Squibb, 4.6 grains.—Each tablet contains chloramine—T, 4.6 grains. E. R. Squibb and Sons, New York.

Dichloramine—T, Squibb.—A brand of dichloramine—T which complies with the New and Nonofficial Remedies standards. For a description of the action, uses, dosage, and chemical and physical properties, see New and Nonofficial Remedies 1918, p. 157. E. R. Squibb and Sons, New York (*Jour. A. M. A.* Aug. 31, 1918, p. 745).

COUNTY SECRETARIES
ARE AGAIN REQUESTED
TO SEND US RECORDS
OF THEIR MEETINGS,
CHANGE OF OFFICERS,
ETC.

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVII

GRAND RAPIDS, MICHIGAN, DECEMBER, 1918

No. 12

Original Articles

A FORTNIGHT IN A FIELD HOSPITAL.

MAJOR ALEXANDER MACKENZIE CAMPBELL,
Medical Corps, U. S. A.,
Chief of Surgical Service.
PARIS, FRANCE.

(American Red Cross Military Hospital No. 5, Paris, France.)

On June 20th, 1918, the writer with two other surgeons from the above named organization, received orders to proceed to Field Hospital "X" for the purpose of observing the methods of surgical treatment employed in the care of American soldiers. The hospital was located but a few miles from the firing line and received only the most seriously injured. Some of the soldiers arrived within three hours after they had been wounded and had only received some first aid attention at a dressing station, such as the application of a haemostat or a tourniquet. Others were unfortunate enough to have lain out in 'No Man's Land' until their serious wounds were so badly infected that they were beyond the help that surgery could have afforded.

The cases received were practically limited to major injuries of the head, chest, abdomen and thigh.

The hospital which contained only a little over a hundred beds, had been taken over from the French, only about a month previous to our visit. It had been a civilian hospital and was managed by the nuns who also prepared the food for the patients. It was an old three-story cement structure which lacked nearly all the conveniences of a modern hospital, but it was beautifully situated in the middle of a garden or court covered with flowers and shrubbery. Supplementing the hospital proper, were a number of Bessoneau tents which were used for various purposes. One tent was used for a recovery ward; one for a pre-operative and treatment ward; one for post-operative cases;

and others for the pharmacy, laboratory, supplies, etc.

In the pre-operative tent, patients were placed on improvised super-heated beds and were gotten, when possible, into operative condition. In the corner of this tent was a small X-ray room, darkened with army blankets. By the use of the Fleuroscopic screen, foreign bodies were oriented with a satisfactory degree of accuracy.

In this tent were also the apparatus and instruments for the transfusion of blood. A very simple microscopic method of making haemolytic tests was employed by the use of known sera, number two and three (using the Moss grouping). Blood was usually furnished by the comrades of the exsanguinated soldiers, inasmuch as the drain upon the hospital personnel would have been hazardous. During the visit, another officer and myself motored ten miles to the American rest camp to obtain a supply of blood for our field hospital patients. We tested haemolytically, fifteen soldiers and obtained four litres of blood which was most cheerfully given. The blood was drawn in the usual way and collected in sterile flasks which contained a hundred cc.'s of normal saline solution, to which were added the contents of a regulation ampule of a solution of citrate of sodium. Blood citrated in this manner will keep for forty-eight hours or longer. It was administered intravenously by a simple gravity apparatus. We observed many cases whose lives might have been saved had blood transfusion been performed before their operation, and we observed many post-operative cases who were veritable "washouts," in whom transfusion would have been a life-saving procedure.

The operating room was sparsely furnished, and presented a very gloomy appearance. There were three operating tables arranged so that three surgical teams could work at the same time. Each team was on service for eight hours. One clean nurse attended the three operating tables and kept a small table adjacent to each operator supplied with the necessary

instruments. This nurse also threaded the few ligatures that were necessary during the course of the day. Each head of the surgical team had one medical assistant. The instruments were few and of poor quality, and the natural and artificial light was inadequate.

At first it was singular to observe that practically no wounds were closed, and on the wall of the operating room, printed on a rough piece of board, were the unmistakable words "Suture no Wounds."

The writer will never forget his impressions on the morning of his first visit to the operating room. A convoy of wounded had arrived early in the day and the hospital was a very busy place. The three surgical teams were working under high pressure in operating soldiers who were terribly wounded. On the floor of the operating room was a huge pile of blood-stained dressings and the sickening odor of fresh, warm blood bore silent, yet obvious testimony to the sacrifice which our American boys are making. It occurred to the writer that if this picture could have flashed across the Atlantic to America, it would have expelled every vestige of indifference that could possibly have existed among our home people, concerning the seriousness of the war.

The physician, fresh from civil life has his surgical sensibilities somewhat shocked when he first enters the operating theater in a busy field or evacuation hospital during a big drive. He soon observes that learning to do military surgery is almost like learning a new language; that some of its principles are revolutionary and that it is a great specialty in itself, which is divided into many specialties, and which can not be learned or mastered quickly or easily.

As a basis he must have a thorough knowledge of anatomy, especially as it pertains to the muscular, nervous and arterial systems. In addition to that he must have well in mind the general principles which govern the treatment of wounds that are being inflicted during the present war, and he furthermore must have a clear-cut conception of the most approved methods of dealing with major injuries of the head, chest and abdomen, all of which are attended with a very high mortality at the present time.

Our two weeks' visit at this hospital permitted us to make a short, but intensive study of this subject.

We observed that in war injuries the most serious infections result from wounds which are caused by the bursting of shells. These

shell fragments, which are irregular in shape, may vary in size from a millet seed to a silver dollar. They may be found singly or in any number. On entering the body they carry with them infected clothing and it has been observed that the outside clothing, which is most virulently infected, is most liable to be present. On the other hand shrapnel bullets and machine gun bullets, which are smooth and regular in their outline, produce wounds that are not nearly so subject to serious infection. Therefore, the surgical treatment of war wounds depends to some considerable extent upon the character of the missile which has produced them.

One of our first observations was that the surgical principles employed in this hospital were based on the well known fact that all war wounds are infected, and therefore operation by debridement was performed at the earliest possible moment.

The term debridement permits of some explanation, for it is the Alpha and Omega of the whole treatment. It means the removal by careful incision and dissection of all infected devitalized and necrotic tissue, which has resulted from the injury which the foreign body has produced. It may mean the simplest procedure applied to a very minor war wound, or it may mean one of the most difficult and formidable operations in surgery. It embraces the removal of all infectious material, commensurate with safety to the soldier's life, whether that material be portions of brain, bone, muscle or other body tissues. The debridements performed in this hospital were very extensive in character for it was realized that the track of the missile into or through the body is not always a true index to the amount of traumatism that is produced. Injury and infection may occur in parts of structures that are beyond the sight of the eye, or the reach of the scalpel. In spite of debridements which appeared to be very thoroughly performed a number of cases died from infection.

Great care was taken to preserve, when possible, nerves, arteries, tendons and skin. One was continually reminded of the fact that the military surgeon must be well grounded in his knowledge of anatomy. He must also have the happy combination of intelligent respect for tissues coupled with the surgical boldness to attack areas and remove foreign bodies which may be situated in very dangerous parts of the body, no part of which is immune to injury and infection.

As a rule, long and extensive incisions were made in the longitudinal axis of the limb, and at times ladder incisions were necessary to procure a thorough debridement. In compound fractures of the femur, for instance, where the missile had shattered the bone and where as a result minute particles of the bone were driven into the muscle producing secondary injury and infection, very extensive and deep incisions were employed and it was necessary in some instances to expose the femoral vessels and sciatic nerve at considerable lengths.

Owing to the rush of patients and the consequent time consumed in operating, in the great majority of cases absolute haemostasis was not obtained. The extensive wounds were packed with plain gauze, which was removed within twenty-four hours, and Carrell tubes and Dakinization were substituted.

So far as the after treatment was concerned, the wounded did not stay long enough in the field hospital to admit of prolonged observation. However an attempt was made to carry out the Carrell-Dakin treatment. In October last year, it was the writer's great privilege to have taken Carrell's course of instruction at the Rockefeller War Demonstration Hospital, and it was most interesting to observe that nearly all the surgical principles that were demonstrated at that institution with such excellent technique and surgical finesse were embodied in the practical work in the field hospital, but it was regrettable that the exact treatment was impossible of execution because of the lack of facilities for making Dakin's solution and administering it properly. In spite of the fact that the whole Carrell-Dakin idea was carried out imperfectly in this hospital, the surgeons seemed to agree that the results they obtained from it, even the imperfect, justified a continuance of its use. The writer is convinced that Dakin's solution properly prepared and properly administered, stands to-day as the most efficient preparation that has been devised to combat infections incident to the present war. But observation and actual experience at the operating table convince him more and more that thorough removal of all infected material by early operation without addition to already existing trauma is the great and important desideratum. There is no question, however, but what some easily prepared antiseptic agent would be of value if it could be used on war wounds as soon as they are inflicted.

A few general remarks concerning the treat-

ment of major injuries of the head, chest, abdomen and thigh might be of interest. In head injuries all operative measures were preceded by X-ray examination. As in civil life brain lesions of varying degrees of severity were observed. The general attitude toward operative interference was conservative, and was largely based upon the urgency and progressiveness of pressure symptoms. As in other parts of the body, debridement was performed if the injury was due to bursting shell. The wounds in the scalp and skull and brain were carefully incised and in comminuted skull fractures all loose particles of bone were removed and the fracture edges were debrided. Foreign bodies were not removed unless easily accessible and unless their removal could be accomplished without any more traumatism than was produced in their trajectory. The dura was not opened if it was not lacerated. Cases of extra dural hemorrhage, invariably due to injury of the middle meningeal artery, were treated by the removal of the blood-clot and hemorrhage controlled by ligation. Trephining was rarely necessary because the opening in the skull usually made it possible to use craniectomy forceps. Portions of infected brain were carefully incised and rubber tissue was used for drainage, which were extended to, but not through the dura. Unfortunately the mortality in these cases was very high, especially where it was necessary to work hastily and to explore extensively. With few exceptions, all the operative cases that we observed went on to a fatal termination.

Injuries to the chest produce about forty per cent. of the actual deaths that occur on the battle-field, and a high percentage of the chest cases that live to reach the field or evacuation hospital die whether submitted to operation or not. In this field hospital it was the rule to operate immediately upon all sucking wounds of the chest. After excision of the tissue at a point of entrance and exit of the foreign body, after removal of rib fragments in case of comminuted fracture, all wounds of the pleura were closed by primary suture. These patients exhibited a marked degree of discomfort and anxiety, until the pleural cavity was closed. It was observed that the pleura itself was very difficult to suture because it is so brittle, but if it is impossible to close it alone, a satisfactory closure can be made by the use of muscles and skin. These wounds were usually closed without drainage. In cases where large foreign bodies were lodged in the pleural cavity, rib

resection was performed, hemorrhage stopped and the hand placed in the pleural cavity from which the foreign body was removed and the cavity closed. While we did not see any cases operated upon who had large foreign bodies in the lung itself, their method of procedure was to open the pleural cavity, deliver a portion of the lung, remove the foreign body, excise the damaged and infected part of the lung, and close without drainage. Through and through wounds of the chest made by machine gun bullets were usually put under expectant treatment, and in cases of haemothorax, unless the respiratory function was sufficiently embarrassed, aspiration was not performed for several days.

In gun shot wounds of the abdomen, we observed the necessity of very early operative interference. It was usually easy to determine a lesion of some abdominal organ. We observed nearly every variety of injury to abdominal viscera. The majority of cases were operated on within twelve hours after injury and the mortality exceeded seventy-five per cent. We did not see an intestinal resection performed at the field hospital, and it was not uncommon to observe cases in which there were a number of perforations in the intestines. These perforations were simply closed by purse-string and Lembert sutures. Splenectomy and nephrectomy were performed in a few instances and in hemorrhage from the liver the wound was usually packed with gauze without attempt to remove the foreign body. It was surprising to observe the small amount of injury produced by some foreign bodies that entered the abdomen, and the great amount produced by others. It was stated that a foreign body may pass entirely through the abdomen without injury to tubular or solid organs. In a thoraco-abdominal injury an incision was made over the wound, the ribs were resected down to the diaphragm, which was excised where the missile had passed through it; the foreign body was removed, the abdominal organs were sutured and the pleural cavity was closed without drainage. Many of the cases of gunshot wound of the abdomen were in severe shock by the time they reached the field hospital, and it is not surprising that the mortality following operation was extremely high.

Another class of very serious cases was that of severity lacerated and severely comminuted fractures of the thigh. In these injuries there was frequently a great loss of both soft and bony tissues resulting in hemorrhage and shock.

Fractured femurs were usually transported in Thomas' splints which seemed to be the best apparatus that could be obtained for purposes of conveyance. It was not uncommon to observe a well advanced case of gas gangrene complicating a compound fracture of the thigh. In such cases, amputation was immediately performed by the guillotine method, and the stump was left entirely open. When embolism of the femoral or popliteal arteries irreparably impaired the circulation, amputation was also performed. When the leg was found to be fractured and greatly lacerated, the wounds were thoroughly debrided, which often required an operation lasting two hours. All infected bone was removed at the seat of fracture, and all pieces of bone fragments that were loosely attached, were removed. Operative procedure often required incisions on either side of the leg, extending from the hip to the knee and the added shock was so severe that in some instances, death occurred on the operating table. In the cases which recovered after operation, the limb was replaced in a Thomas' splint.

Gas gangrene, which may well be called the Bete Noire of the military surgeon, occurred quite frequently, and as soon as it was detected, operation was performed. Gas gangrene is essentially a disease of the muscles, and the operations consisted in incising the diseased portions and in some instances completely extirpating entire muscles. In the extremities, when the disease was found to be making rapid progress toward the body, amputation was performed. Death has been known to occur in twelve hours after infection, so it is obvious why operation was performed in these cases as soon as the diagnosis was made. The only hope for these cases was in early surgical interference which stopped the progress of the disease in many instances. We were impressed with the necessity of making a close study of the early symptoms of gas gangrene so that it might be checked, for it is most amenable to early surgical treatment.

Reflecting upon this very interesting visit, and upon some personal experience in war surgery, where theories have been applied to actual work at the operating table, the following conclusions have been reached.

CONCLUSIONS.

1. Military surgery, well performed, is a difficult art.
2. In the treatment of war wounds in the Zone of Advance, the surgeon must learn to

adapt himself to a very different environment and a very different type of surgery than are seen in civil practice.

3. A thorough knowledge of anatomy and an economical attitude toward the conservation of tissue are essential, in order to preserve important structures.

4. Thorough debridement must be accomplished in every case where the injury is caused by fragments of exploded shell.

5. The value of various antiseptics used in post-operative treatment, while of interest, is insignificant compared with the importance of early and thorough operation which removes from the wound every particle of devitalized and infected material.

RESUME OF FIVE YEARS OF THE BUTTERWORTH ORTHOPEDIC CLINIC.

WILLIAM E. BLODGETT, M.D.,
DETROIT, MICHIGAN.

In March, 1913, the Butterworth Orthopedic Clinic was established, through the kindness of your staff, in response to a need for this kind of work, which was already manifested by a considerable number of cases in Grand Rapids then under my care.

Since then the Clinic has met twice a month, the first and third Fridays, with only a few exceptions. Last year there was no variation in the twenty-four meetings. The attendance has gradually increased so that last year the total attendance was 505; the average attendance 21; the maximum attendance 28; and the minimum attendance 13. Last year there was a total of 121 new patients, and 39 operations, as follows:

Infantile Paralysis, 13; Congenital Club Foot, 8; Tuberculous Joints and Bones, 5; Congenital Dislocation of the Hip, 4; Spastic Paralysis, 2; Torticollis, 2; Miscellaneous, 5.

The Clinic is indebted to Dr. Vyn of Grand Rapids, and Miss Ida Hall, graduate nurse, for assistance at the Clinic meetings and for caring of the work between meetings. It is to be noted that, considering the number of meetings, this Clinic is a very rich and large one, unsurpassed in the State, or for that matter probably unsurpassed except by one or two clinics in any of the adjoining states. Out of this really large amount of material I have selected for special mention the two operative conditions in which we have had the largest Grand Rapids experi-

ence, namely, infantile paralysis and congenital club foot.

The care of infantile paralysis is, to my mind, rightly considered orthopedic from the cessation of the acute symptoms of the infection, and as soon as the diagnosis of paralysis is made the case becomes essentially orthopedic, meaning by that, a case in which preservation or restoration of function of the locomotor and supporting apparatus is the chief consideration. As long as there is any tenderness in the muscles and usually for two months after the onset, rest of the involved parts is indicated. The common contractures are guarded against by supporting the feet while in bed, or while sitting, from long remaining in the plantar-flexed position. The knees and the hips also are kept part of the time fully extended. The parts are kept warm and massaged or rubbed, but never to produce pain. After the expiration of two months, more vigorous measures are undertaken, and passive and active motions are begun. This marks the beginning of the opportunity for so-called muscle training, which is nothing more than assisting the patient to making definite movements, the very movements which it is difficult for him to make. It is believed that in this way the central nervous cells can be to some extent re-educated so as to be substituted for the diseased ones or to favor their restoration. At this time also the matter of braces comes up for consideration.

A brace is a device for favoring function, usually a means of enabling the patient to walk, and to some extent a means of preventing contractures. It should be borne in mind that every brace through constriction and weight does harm, and it is only when the brace does more good than harm that we should advise or use a brace. Often the best arrangement is the use of a brace for short periods and the removal of it during the longer rest periods, to favor nutrition. It must be admitted that the orthopedic surgeon often finds patients are being weighted and restricted by braces that are certainly doing more harm than good. It is ordinarily unwise to allow the brace maker to use his own discretion in prescribing for the patient. If the doctor is not acquainted sufficiently with brace possibilities to measure for and design the brace himself, and thus prescribe the brace as he would prescribe medicine, he can at least discuss the matter with the brace-maker and in this way the efficiency of each can be increased by the knowledge supplied by the other. In general, the brace should be

as simple as possible to effect the definite indications that are required.

Nearly all operating in infantile paralysis is postponed until after two years from the onset, the two years being the period in which nature can be expected to make restoration. Certain operations, however, like the support of the head of the humerus to the acromion, thus relieving the strain of the weight of the arm from the weakened or inactive deltoid, are indicated before the expiration of this period, as a help to nature, but any operation which assumes the permanent disability of a muscle should not be undertaken until these two years have passed. Mild contractures of the tendo-Achillis or of the hamstrings are best met at this early stage by stretching in plaster paris rather than by section.

Once we are confident that the essential paralysis is fixed and not subject to further natural improvement, we have a large variety of resources to restore function to the affected parts. It is manifestly impossible to speak in detail of many of these operations, but I desire to refer to two particular lessons which our work in Grand Rapids might illustrate.

One is the disadvantage of lengthening every shortened tendo-Achillis. I would say that in certain cases lengthening of the tendo-Achillis to conform to normal conditions does vastly more harm than good. If the extensor muscles of the knee are weak a mild degree of shortness of the tendo-Achillis is a decided advantage in supporting the knee against flexion. The explanation of this is that with the sole splinted against the floor and the tendo-Achillis somewhat short the tibia is forced to assume a position slightly back of the perpendicular to the plane of the floor, thus tending to hyper-extend the knee and hold it locked under the superincumbent weight, being in this way mechanically similar to the action of the knee in the artificial leg. This action is of great advantage to the weakened quadriceps extensor muscle, and in fact enables in certain cases the patient to walk without support and without falling even when the quadriceps extensor is completely paralyzed. As far as I know, this observation has never been given prominence before.

The other lesson from our work in infantile paralysis is the excellent functional result in a foot otherwise practically unusable because of extreme and extensive paralysis of the leg muscles, from the operation of astragalectomy and the displacement backward of the tarsus under the tibia and fibula. By this operation

there is produced a foot permanently stable against lateral motion and yet allowing a useful amount of antero-posterior motion. This operation will save many feet from amputation and gives a result which is as permanent as it is eminently satisfactory. This operation was first brought forward by Dr. Royal Whitman and has many warm advocates. I myself have performed this operation about forty times.

The proportion of congenital club foot cases in Grand Rapids has been greater than in the Detroit work, as last year in thirty-nine operations we operated on eight club foot cases.

The lesson I desire to mention in this connection is the advantage of overcoming the adduction of the foot in front of the medio-tarsal joint before the correction of the equinus; in other words, the front foot is drawn laterally outward while the toes still point downward. This correction is ordinarily best produced by simple stretching and unless this part of the deformity is thoroughly over-corrected before the equinus is overcome, the probability is that the patient will never have a straight sole but will always show the curve of the sole with the convexity outward, which is the commonest imperfection of result. Accordingly, we now always apply at least one preliminary corrective plaster, even in infants, thus overcoming the adduction of the fore-foot in the way described. Thorough insistence upon this preliminary work has recently enabled us to satisfactorily over-correct the deformity without any bone operation, such as we at first thought would be necessary. The whole principle, of course, in the correction of club foot is the wide over-correction of club foot, and the maintenance of this over-correction until such time as the deforming tendency of club foot is worn out. Club foot is not only a fixed deformity but is to be regarded an active deforming tendency, and if not so considered disappointing relapse is sure to occur. The younger the patient the easier to attain over-correction and the longer it is necessary to maintain over-correction, in order to overcome the deforming tendency. This deforming tendency is often best offset by night rather than day braces, thus allowing free use of the foot with the minimum of restraint in the day time, and correspondingly strengthening and adjusting the foot to its normal function.

The best time for operating in club foot cases is at about eight months, so that by the time the foot is fully over-corrected the patient may be able to walk upon it, thus consolidating the

foot in the new position. It is sometimes necessary, however, for the peace of mind of the parents, to apply correcting plasters for short periods earlier in the infant's life, but such apparatus should never be left on more than a week or two in order not to interfere unduly with the growth of the leg at this actively growing period.

SOME UNSETTLED POINTS IN THE SURGERY OF THE THYROID GLAND*.

MAX BALLIN, M.D.,
DETROIT, MICHIGAN.

The surgery of the thyroid gland, in the last ten years has become a fairly settled chapter. The mere presence of a simple goiter is an indication for its removal as we know that nearly all of them grow and will sooner or later cause pressure and toxic symptoms; also the possibility of malignant degeneration in later years has to be thought of. (We saw in 200 cases three times malignancy follow in pre-existing goiter.) Thanks to the greatly improved technique, the mortality rate of operations for simple goiter has become such a low one that we do not abstain any more from removing goiters even if at the time they do not cause any other symptom than disfigurement. Our last two hundred goiter cases show a mortality of 1½ per cent. Three cases died; one an advanced case of Graves' Disease, after resection; one a malignant goiter and one from collapse of trachea after removal of a large retro-sternal goiter.

The operation for goiter which ten or fifteen years ago was only done by a few exceptional men, has become the common property of every surgeon's household. Still there are a few questions in this large topic of the thyroid gland which remain unsettled, or at least are answered not equally by different surgeons.

Such are:

1st. The question what to do with large multi-adenomatous goiters where several more or less large cyst adenomas are present in both lobes of the gland. (Sketch I) or where the whole gland is permeated by many small colloid cysts forming a goiter that looks more of a general parenchymatous enlargement of the gland.

2nd. The second unsettled question is still more important; namely, what to do or how to treat surgically, the many serious cases of

exophthalmic goiter who can not have a classical thyroidectomy.

These two questions I have chosen as the topic for our consideration.

The first question, how to operate on thyroid glands where most of the gland is taken in by several large or many small cyst adenomas or tumors of the mixed variety. For these cases it has to be remembered that a total thyroidectomy can not be done on account of the danger of myxedema following. The rule is to leave two-thirds, or after others, three-fifths of the gland. If we would simply follow this rule and for instance, remove one lobe, isthmus and a

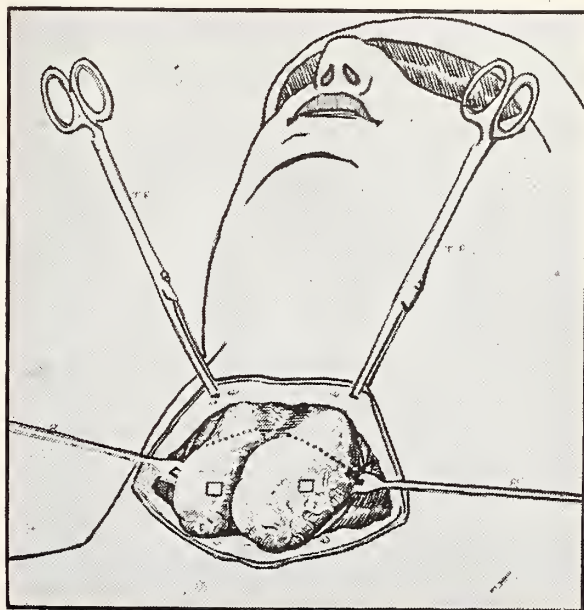


Fig. 1. A large adenoma takes in either lobe of the gland, leaving the upper poles free of tumors. Lines of resections of gland.

part of the other lobe, we would usually leave a thyroid rest, with small or large cysts. Such cystic remnants will in the first place, look badly; the patient will not be satisfied. Then such cysts, grow, by no means infrequently, especially in the line where the gland was resected, to large tumors, requiring another operation. We have had such secondary operations for new cysts, or better, enlargement of small cyst left in the primary operation, about ten times. To overcome this difficulty, two methods must be borne in mind: first, a method which in this country was made known by a publication from the Mayo Clinic, which is so-called cone-shaped, or plastik resection of the gland.

It consists briefly, of first freeing the isthmus from the trachea, separating the two lobes at the middle of the isthmus and then taking out from each lobe a cone-shaped piece. It seems

*Read at the meeting of the Michigan State Medical Society at Battle Creek, May 14th, 1918.

to us that the separating of and cutting through the isthmus is often superfluous and complicates the method unnecessarily. The isthmus itself is very seldom enlarged; usually it is the enlargement of the lateral lobes which extends into the isthmus. By taking out cone-shaped pieces from each of the lobes and prolonging the incision into the isthmus, we can get the same result without tunneling between trachea and isthmus and cutting through the latter. This cone-shaped excision leaves symmetrical remnants of the lobes and therefore gives a good cosmetic result. The operation is relatively easy and from many cases where we have done it, I can assure you that the hemorrhage is not worrisome. A deep stitch running through the gland tissue and an adapting stitch

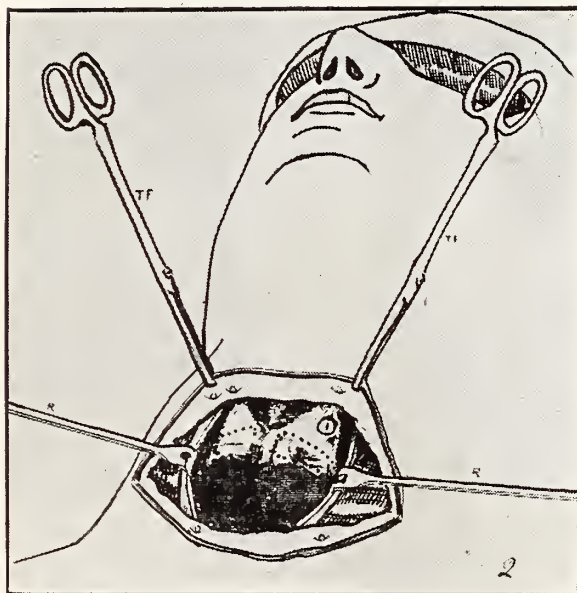


Fig. 2. The two gland-rests on the upper poles after removing the tumor bearing parts.

bringing capsule layer together will control the hemorrhage well.

A second method for handling these diffuse goiters is founded on the observation that the upper poles of the thyroid lobes where the large superior vessels enter, are usually free from cysts, adenomas and colloid cysts; therefore, we have often tried to save the good glandular tissue on one or both upper poles while removing all the other cyst bearing parts of the gland. It must be borne in mind that adenomatous mixed tumors and cysts interfere with the function of the little surrounding gland tissue and that surrounding gland tissue may contain small cysts as we saw, a source for new tumor formation. Therefore, it is better to remove all the cyst bearing gland tissue and leave only the

well blood supplied healthy tissue around one or both upper poles. (Sketch I.)

If the gland rest is large enough to cause deformity, it is at times possible to suture it in the place of the removed goiter by one or two catgut sutures to some capsule rest close

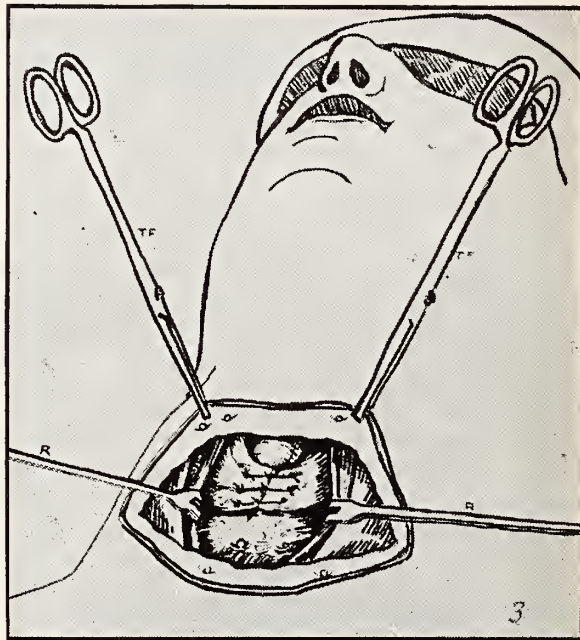


Fig. 3. Gland-rests on upper poles united loosely in midline in front of trachea.

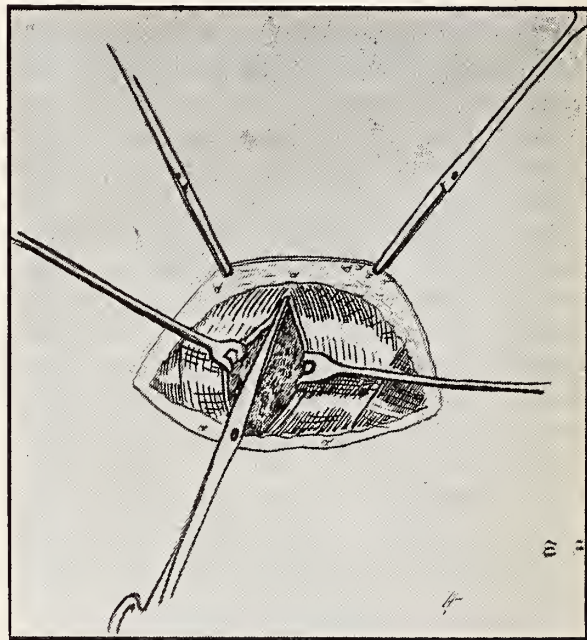


Fig. 4. After turning up skin-platysma flag and ligating the large fascia-veins, the straight muscles of the neck (Sterno-hyoid and Sterno-thyroid) are divided in midline (Linea alba of neck).

to the trachea. Sometimes, when we leave two rests of thyroid on each upper pole, the two can be brought together by a few sutures in front of the trachea. (Sketches 2 and 3.) In

this way we are able to get good cosmetic results.

We have never had myxedema follow any one of these procedures. It seems that these patients, by the long-standing existence of goiter, have become accustomed to getting along

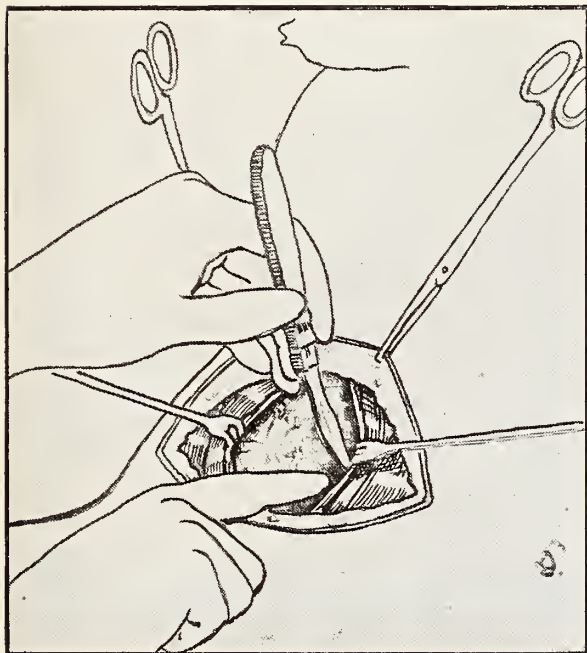


Fig. 5. Straight muscles are separated from the gland.

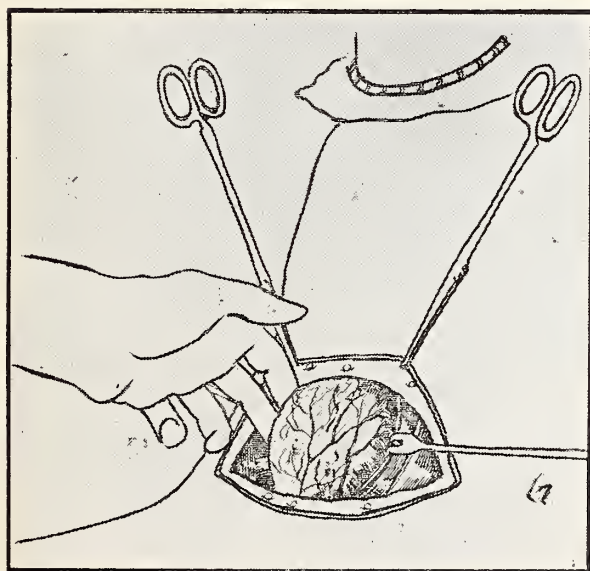


Fig. 6. Gland exposed. Muscles drawn to both sides without cutting them.

with very little functioning thyroid tissue. It seems our idea of leaving two-thirds or two-fifths of the gland needs some revision, at least in the type of cases mentioned.

We come to the second part of our consideration, which is the more important question—what to do with severe cases of hyperthyroidism.

Since it was recognized that Graves' Disease is due to an increased function of thyroid gland, operations have been done to decrease this function. This was accomplished in different ways: first by cutting away part of the gland—that is either thyroidectomy or resection of the gland. Second, by diminishing the blood supply of the gland—that is through ligation of one or more thyroid arteries or pole ligation. Third, by destroying some of the gland tissue by X-rays, Radium or hot water injections.

There can be no doubt that a partial excision of the gland is the most efficient method of accomplishing this object. On the other hand, the objection to this method is its great

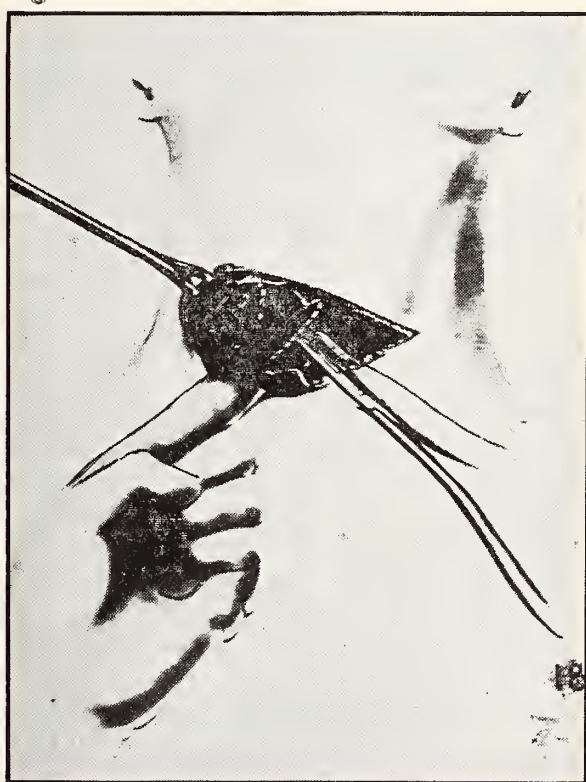


Fig. 7. Three interrupted catgut sutures transfixing the gland. Fourth one just transfixes gland. Index of left hand protects the needle from piercing gland posteriorly.

risk to the patient, who, with high pulse rate, exaggerated nervous symptoms and beginning myocarditis, can not stand much surgical handling. After these operations, all symptoms present before are exaggerated for a few days. We have to reckon with this so-called post-operative thyroidism and it is at this period about the first three days after the operation—that patients succumb. The mortality rate in severe cases of Graves' Disease is still high, ranging by different men from 3 to 8 per cent.

I wish to say right here, that in nearly all cases of secondary Graves' Disease, or toxic goiters as others call it, that is, cases where

symptoms of thyroidism supervene in pre-existing adenomatous goiter, the removal of the goiter should be the method of choice. For this very reason, it is in my opinion, very wise to make this distinction between primary and sec-

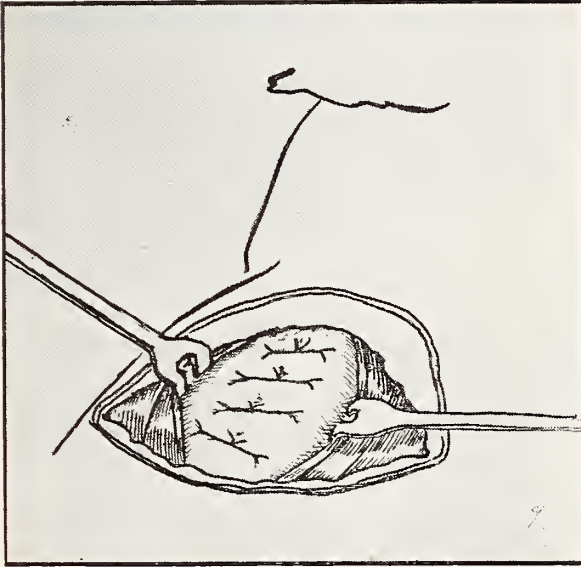


Fig. 8. Four transfixing sutures not tied to show depth of stitches.

ondary Graves' Disease. I may spend a few words on this distinction.

In a secondary case, the patient has carried a goiter for some shorter or longer period of time and suddenly, due to irritative changes around the goiter, symptoms of thyroidism, tachycardia, nervousness and not so frequently eye symptoms, arise. In the primary type we have a more general enlargement of the gland without any adenomatous formation and the cell and colloid changes characteristic of Graves' Disease permeate the whole gland. The goiter appears nearly simultaneously with the other symptoms. The secondary type, even with a pulse rate of 140, will always stand a radical operation, that is removal of the goiter. No so the primary type—which, when well developed, will not stand undue surgical handling. If the primary type has a pulse rate over 140, great restlessness and disturbances of metabolism, the excisions of the gland carry with them the great danger of succumbing to post-operative thyroidism. To overcome this danger, lesser operations, ligature of arteries, poles of the gland and hot water injections have been recommended. The pole ligature or ligatures of one or two arteries is always only a small step toward the cure. The patient's condition improves somewhat after the operation but relapses of the thyroidism will always follow. The same can be said about injections

of hot water, and to me personally, it seems that the fatality in serious cases of thyroidism where this method was employed, is very high. It is not the innocent and undangerous method that it appeared to be, after its first recommendation; a hypodermic syringe filled with anything always appeals to a multitude of physicians and to the patient. Hypodermic injection does not sound like operation, but still may be more dangerous.

Twelve years ago, in my first publication on goiter, I have shown that iodine injections into the gland were often followed by serious complications: abscess, sloughing, pyemic conditions and even by sudden death. I anticipate the remark that iodine should not be compared with hot water, as iodine increases thyroidism. But this does not seem to be the dangerous element in the injection. It is more the reduction of the thyroid tissue caused by the iodine as well as by the boiling water, that leads to such dangerous complications. Three times in consultative practice, I have seen injections of hot water into the gland that during the first two or three days after injection the patient seemed to improve and then suddenly go to death, after becoming delirious. The delirium after hot water injection, seemed to be more pronounced than the heart symptoms.

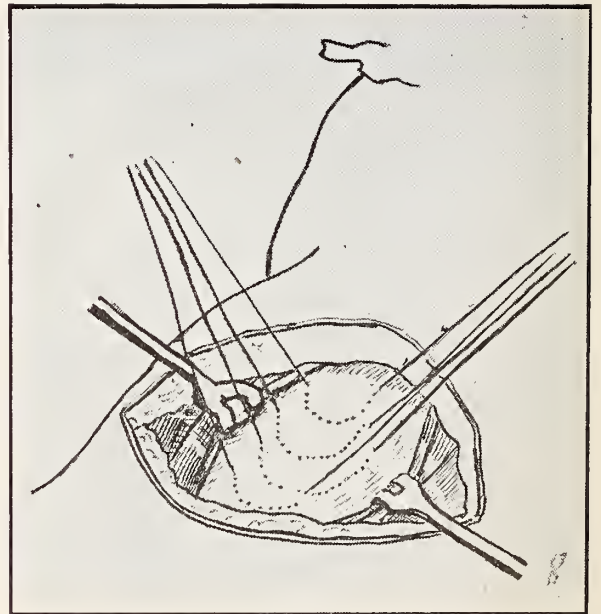


Fig. 9. Transfixing ligatures tied.

I further believe that hot water should never be injected in cases of thyroidism with adenomatous changes in the gland, because the secondary cases as told will all stand a radical operation. If you look through the records of

hot water injections, Dr. Miles Porter has injected a good many of the secondary type. These cases recover easily from radical operations and do not need injection methods. For serious cases of primary Graves' Disease we have practiced a method which we have termed "Transfixion of the gland" and it consists of several ligatures transfixing the gland, in detail:

We expose the gland by a small transverse collar incision separating the straight muscles of the neck—for the last few years we have not cut them. (Sketches 4, 5 and 6.) After the gland had been exposed, a No. 2 chromic catgut stitch is run through the gland continuously or interrupted in such a way that only the gland tissue proper is pierced, without infringing on its posterior extra-capsular part of the gland where the inferior thyroid enters the laryngeal nerve and parathyroids are located. (Sketches 7, 8 and 9.) The idea is that along this chromic catgut; the secreting glandular tissue is replaced by connective scar tissue and herewith the secretive part of the gland is diminished. In two cases of secondary operation after transfixion we excised pieces of the gland from the seat of the transfixing ligatures and could show scar tissue in place of glandular tissue. This method has proved successful in so many cases that we are not afraid to recommend it. The reducing influence of this transfixion on the secretion of the gland seems to be much greater than that of the ligature of one or two arteries, which is clear if you consider how well the thyroid gland is nourished by blood from two arteries; the inferiors from the subclavian system and the superiors from the carotic system—a supply that is only equaled by the supply of the brain.

We take pains in starting our suture close to the right or left upper pole like a pole ligature. Keeping the left index finger protecting posteriorly, (Sketch 7) we go through the gland taking in our stitches as large masses as possible and always including the accessory veins—under which names they are known since Kocher. In this way we also interfere with venous circulation of the gland as recommended by Tuchsolske. This interrupted stitch can be carried through both lobes without the danger of getting myxedema as we get only fibrous streaks on the places of suture.

The method is so efficient, that in my oldest case done in 1909, a very pronounced one with every sign, exophthalmus, tremor, goiter, etc.,

I would challenge anyone to diagnose Graves' Disease to-day. Lately we have closed most of these wounds simply by letting the longitudinal muscles, sterno-thyroid and sterno-hyoid, fall together in the middle line, fastening them with two or three not too tight catgut sutures and then stitching the platysma, fascia and subcutaneous fat by a running catgut stitch and uniting the skin with slips or silk without any drainage.

From this method we have had very little post-operative thyroidism, often nearly invisible scars and in most cases very gratifying results.

In our last two hundred cases we have applied this method twenty-six times for primary Graves' Disease. This shows that we do not use it as a method of choice but only where the symptoms are such that the prognosis of major operations would be too grave. Of the twenty-six cases, none died. Several are cured completely or their improvement has come so close to a cure that no further operation is indicated. Only in one case, after a primary improvement, recurrence of all symptoms occurred and this patient is now nearly cured by a second transfixation.

I do not claim a complete cure of all symptoms of Graves' Disease by this method. This has been accomplished only in a minority of cases—but I claim that the improvement after this method is such that the patient is satisfied and does not wish for any better condition. The gain in weight is very marked; the pulse rate becomes slow, the troublesome palpitation of the heart ceases and the nervousness disappears. Only the eye symptoms are usually but partially influenced.

If we compare this method with the large mortality rate from resection in serious cases of Graves' Disease, not too much can be told in its favor. By this method, in the last four years, we have kept down our mortality rate to a remarkable degree. In fact, my only fatal case of Graves' Disease was in a man whose gland was resected. The gland presented itself so nicely in the wound that it was seducing to do a partial thyroidectomy in spite of the serious symptoms of the patient warning against such procedure.

We also feel from our results, that this method is less dangerous than the injection of hot water and not more dangerous than a pole ligature, but is much more efficient than any of these methods.

355 Woodward Avenue.

DISEASES OF THE AORTA—AN ANALYSIS OF FIFTY-FOUR CASES.*

WALTER J. WILSON, JR., M.D.

DETROIT, MICHIGAN.

(Associate Professor Pharmacology and Therapeutics Detroit College of Medicine and Surgery.)

ADDENDA—EXPLANATORY OF CERTAIN PHENOMENA.

W. F. KOCH, Ph.D., M.D.,

DETROIT, MICHIGAN.

(Professor of Physiology, Detroit College of Medicine and Surgery.)

In an analysis of 456 cases of cardiovascular disease, which have been under our observation largely in the last four years, there were seven cases in which aortic stenosis was considered a justifiable diagnosis, twenty-two cases of aortic regurgitation, nineteen cases of aortitis and six cases of aortic aneurysm, a total of fifty-four cases or about 12 per cent. When we consider that many of the cases under consideration did not exhibit a marked pathology, such cases as sinus arrhythmia and premature systoles being included in the group, this is fairly high percentage. Greiwe, in a study of the records of the necropsies in the Cincinnati Hospital from 1900 to 1903 found that of 854 patients 160 had well defined heart lesions. The following were the divisions of the heart cases: aortic lesions forty-three; mitral lesions, forty-three; combined aortic and mitral lesions, thirty-eight; pericarditis, sixteen. When we consider facts like these and our survey of the literature shows the great preponderance of articles on mitral disease it is evident that the attention of the medical profession has not been sufficiently directed to the consideration of the possibility of the presence of aortic disease. The symptomatology is admittedly obscure in many cases, but we are confident that the chief difficulty resides in the mental attitude of the examiner. That is, they must be looked for to be found. Allbutt quotes Barie, who says of aortitis "*elle pousse souvent inaperçue . . . elle demande a etre cherchée.*" From a study of these cases we would conclude that although when a person becomes affected with syphilis he is extremely likely to develop aortic disease, on the other hand, aortic disease should not be ruled out because of the fact that syphilis has never been a factor in the past history of the patient. Competent authorities, not only from careful clinical studies, but also from the consideration of necropsy records, give as etiolog-

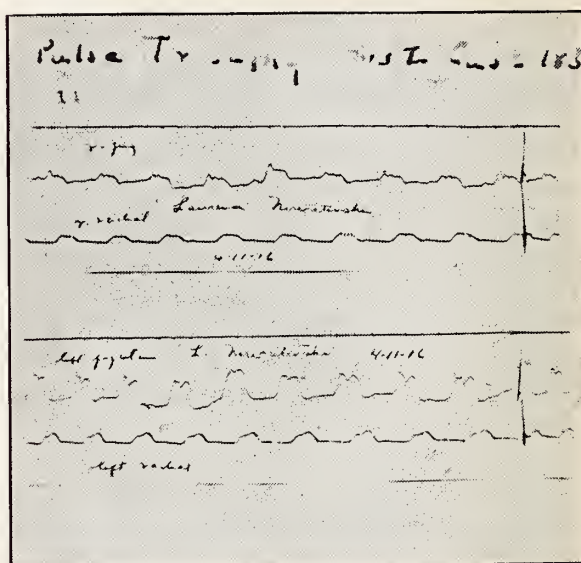
ical factors, small-pox, scarlet fever, streptococcus infection, diphtheria, typhoid fever, influenza, pneumonia, malaria, tuberculosis and gonorrhea.

AORTIC STENOSIS.

The normal opening of the aortic valve is 7 cm. In the milder grades there is adhesion between the segments of the aortic valve which



Figure No. 1. Shows thickening of first part of the aorta in a case of aortic stenosis. (Case No. 183).



Pulse Tracing No. 1. Shows plateau pulse in both right and left radial in a case of aortic stenosis. (Case No. 183).

are so stiffened that during systole they can not be pressed back against the aortic wall. The valves are usually thickened but they may be thin. In the later stages calcareous degeneration often takes place. A relative stenosis may occur, when with normally aortic valves and ring, there is a dilatation of the aortic beyond. Aortic stenosis may be congenital, may result from changes associated with arteriosclerosis,

*Read before the Wayne County Medical Society, January 14, 1918.

(the senila type) but the usual cause is streptococcus infection. In none of the seven cases which we have observed, is syphilis a proved factor. Blood Wassermans were negative in two cases. In one case there was a history of double peritonsillar abscess, in one case there was a history of injury to the heart region as the result of a fall, in another case there were frequent attacks of tonsillitis, while in two cases arteriosclerotic changes were considered to be the cause. There were six males and one female, their ages ranges from 27 to 68 years of age, the average being 38 years. The blood

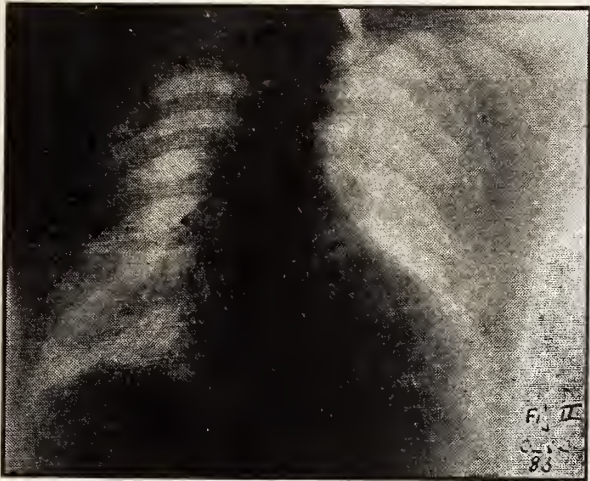
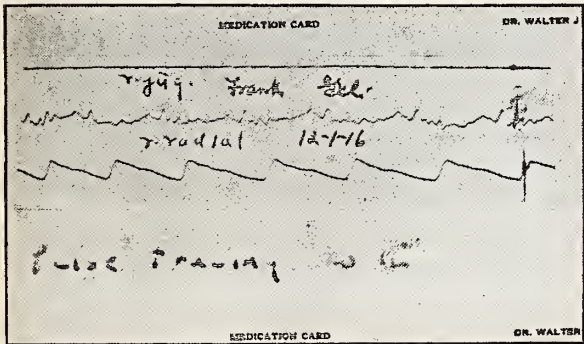


Figure No. 2. Shows thickening of the first part of the aorta not causing aortic stenosis. (Case No. 83).



Pulse Tracing No. 2. Shows a normal radial pulse in the presence of a marked systolic thrill in the aortic area accompanied by systolic murmur. (Case No. 83).

pressure was usually low, in only one case being at all high, and evidently being associated with changes in the kidneys, when it was 160 systolic, diastolic 130. The lowest systolic pressure was 100, diastolic 60. The average systolic blood pressure 115, the average diastolic was 88. Premature beats were present in two cases, in one appearing when the patient arose to a sitting position from a recumbent one. The diagnosis was made on the following symptoms: A systolic thrill, palpable in the aortic area, systolic murmur, audible in the aortic area, a diastolic

murmur, replacing the aortic second or an absent second with a plateau pulse, which must be bilateral. A plateau pulse may be observed in one radial in aortic aneurysm, while on the other side the pulse will be normal. The ventricle shows enlargement, the apex usually being in the sixth space. It is in this disease that hypertrophy without dilatation is especially likely to take place. Shortness of breath on exertion was a common complaint. In three of the patients anginal symptoms occurred. Syncope of short duration occurred in one patient, while in another patient after exertion, an attack of unconsciousness lasting from five to thirty minutes supervened. In one patient the precordial pain which occurred at the beginning of exercise, ceased if the exercise was persisted in. The treatment consisted in putting the patient's exercise on a plane where circulatory disorders did not appear. Digitalis was a helpful factor in most of the cases.

Table I.

Figure 1 and pulse tracing 1, should appear in body of text on aortic stenosis. Also Figures 2 and pulse tracing 2.

TABLE NO. 1. AORTIC STENOSIS.

Case No.	Sex	Age	Pulse	S.B.P.	D.B.P.	Arrhythmia	Oedema
6	Male	27	98	100	80	None	None
11	Male	41	92	106	80	1. arm None	Slight in ankles.
				102	72 r. arm		
138	Female	68	78	160	130	2 pre. beats in 30 seconds	None
183	Male	40	80	118	60	Premature beats on sitting up.	None
373	Male	34	64-120	105	Not obt.	None	Present in feet. Moist rales at lung bases.
456	Male	59	70	118	108	None	Slight of legs.
499	Male	49	78	115	90	None	None

Dr. Walter J. Wilson, Jr.

AORTIC REGURGITATION.

In the consideration of the twenty-one cases of aortic regurgitation, there were nine cases which were clearly specific, and twelve in the non-specific. In the non-specific group, blood Wassermans were negative in two cases, while in the other cases a clear history of infectious arthritis occurred. In these cases there may also have been some luetic infection but there was no clear indication thereof. In the non-specific group there were eight males and four females. The youngest patient was a male aged 16, the oldest a male aged 44, the average age being 28 plus. In the specific cases there were nine males. The youngest one 27 years, the oldest one 52 years of age, the average age being 42. Wassermans were positive in the five

cases in which it was done. The diagnosis was made upon the following symptoms: Diastolic murmur, jumping arteries, Corrigan pulse, a capillary pulse and a pistol shot femoral or brachial. The brachial gives the pistol shot phenomenon as well as the femoral and on account of its accessibility is the point of choice

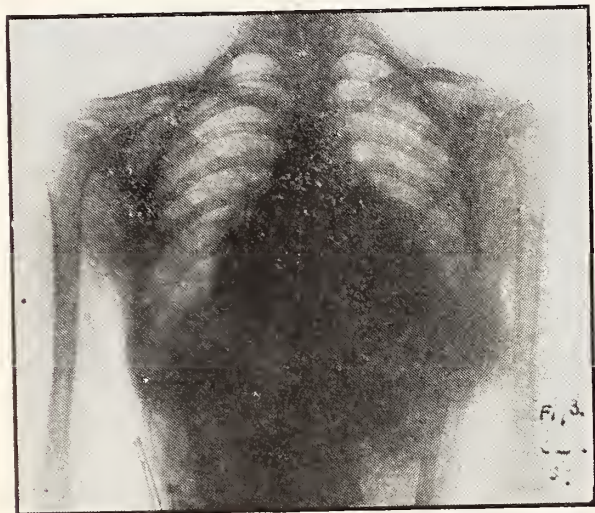
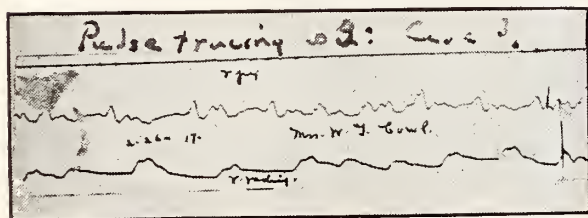


Figure No. 3. Illustrates a case of aortic regurgitation non-specific type. (Case No. 37).



Pulse Tracing No. 3. From same patient as figure No. 2, shows auricular fibrillation, also tendency to aortic stenosis. (Case No. 37).

for eliciting this sign. The blood pressure in the non-specific cases ranged from 120 systolic to 215 systolic. The diastolic blood pressure, using the auscultatory method ranged from zero, in those cases in which there was no demarcation from a phase in which the sharp sound changed to a weak one, to 100 which occurred in a case in which the systolic blood pressure was 200. The pulse pressure ranged from 40 to 150. In two of the non-specific cases the diastolic murmur developed while the patient was under observation, both having at the time of the first examination, marked mitral regurgitant murmurs. In regard to the blood pressure, a curious phenomenon occurs when on taking it in the lower extremities, it is found to be higher than in the upper extremities. W. F. Koch, Prof. of Physiology, Detroit College of Medicine and Surgery, has devised an ingenious apparatus which demonstrates mechanically his explanation, which is that it is

on the principle of suction. (See explanation.) The treatment in the non-specific cases has proceeded on general lines. In case of pulmonary oedema occurring in this group, caffeine has given the most beneficial results. In one case in which a marked oedema developed in the lower extremities, almost magical results followed the administration of theobromin sodium salicylate. Digitalis has been used in both types of cases, with only moderate results, while it seemed to have no deleterious effects. The pulse rate in a number of the cases was accelerated. This probably results from an implication of that part of the aorta from which normally stimuli arise which stimulate the vagus reflexly. This is also Koch's explanation (see explanation) and obtained for those cases also of aortitis in which the pulse rate is accelerated. In the specific cases, neosalvarsan was used in doses of .15 gm. intravenously, but without particularly happy results in many of the cases.

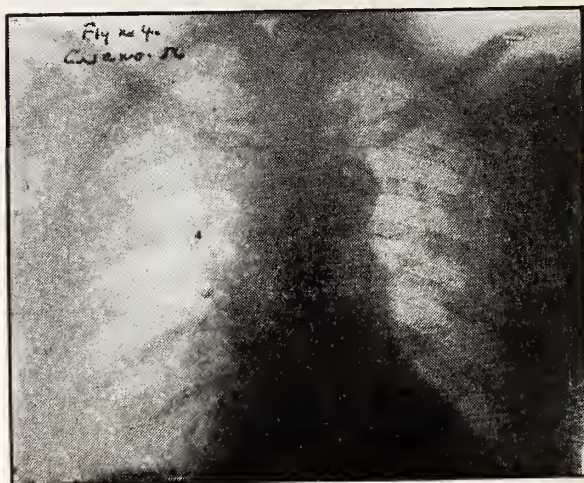
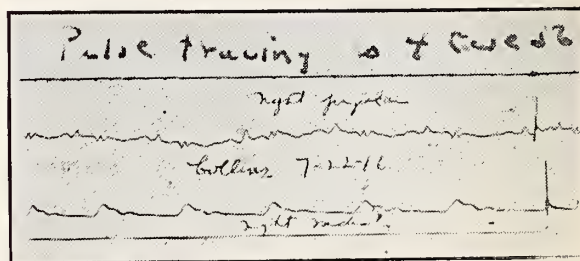


Figure No. 4. Shows marked aortic knob in a case of syphilitic aortitis. (Case No. 56).



Pulse Tracing No. 4. Showing perfectly regular pulse with syphilitic aortitis. (Case No. 56).

AORTIC REGURGITATION.

In aortic regurgitation of the specific type, premature beats occasionally were observed in two cases, in one of whom the beats were interpolated, while in the third case there were

short series of two or three beats. In the non-specific cases auricular fibrillation occurred in three, while premature beats occurred in two others, one occasional and the other every alternate beat.

Tables II. and III.

Figure 3 and pulse tracing 3 should be shown in text of non-specific class.

TABLE NO. 2.

AORTIC REGURGITATION.

Specific.

Case No.	Sex	Age	Pulse	S.B.P.	D.B.P.	Arrhythmia	Oedema
23	Male	37	76	182	60	None	None
29	Male	51	68	160	50	Pre. beats	Present. Some dullness at lung bases.
54	Male	48	84	150	50	None	None
64	Male	47	110	165	90	None	None
86	Male	40	94	140	55	None	None
							Moist rales in left lower base.
94	Male	34	72	175	110	None	Present
198	Male	38	72	145	60	Interpolated systoles	None
213	Male	52	78	140	60	Pre. beats in series.	Present
296	Male	27	102	138	45	None	Present
363	Male	36	106	115	65	None	Marked

Dr. Walter J. Wilson, Jr.

TABLE NO. 3.

AORTIC REGURGITATION.

Non-Specific.

Case No.	Sex	Age	Pulse	S.B.P.	D.B.P.	Arrhythmia	Oedema
22	Male	32	72	200	100	None	None
37	Female	27	84	130	60	Auricular Fibrillation	None
141	Female	20	88	142	45	None	None
205	Male	38	76	120	80	None	None
265	Male	34	114	174	70	Auricular Fibrillation	Passive congestion of liver.
293	Male	31	110	152	70	Pre. beats every alternate beat on occasions, in others in series.	Marked
342	Female	43	114	215	65	None	Present
331	Male	18	116	130	No dia. phase.	None	Present in feet.
395	Male	19	96	120	No dia. phase.	None	None
433	Male	16	126	136	40	None	None
441	Male	44	140	144	84	Auricular Fibrillation	Present
			(Sept. 29th, 1917.)			Pre. beats	
			70 125 65				
			(Oct. 3rd, 1917.)				
			84 160 80				
			(Oct. 21st, 1917.)				
			84 160 70				
			(Oct. 23rd, 1917.)				
502	Female	21	82	160	No dia.	None	None

Dr. Walter J. Wilson, Jr.

AORTITIS.

The discussion of aortitis is comparatively recent, the best description being given by Clifford Allbutt in his book on Diseases of the Arteries. In our series of cases there were nine specific and ten non-specific. In the specific group the youngest patient was 33, the oldest 50. There were eight males and one female. In

six of the cases blood Wassermans were positive, while in the other the clinical findings were absolute. The diagnosis in these cases devolved upon finding an increase in the borders in the second space, the normal limits not exceeding six cm. In five cases there was a systolic murmur audible in the aortic area, while the aortic second was clear. In one case there was a diastolic murmur and the aortic second

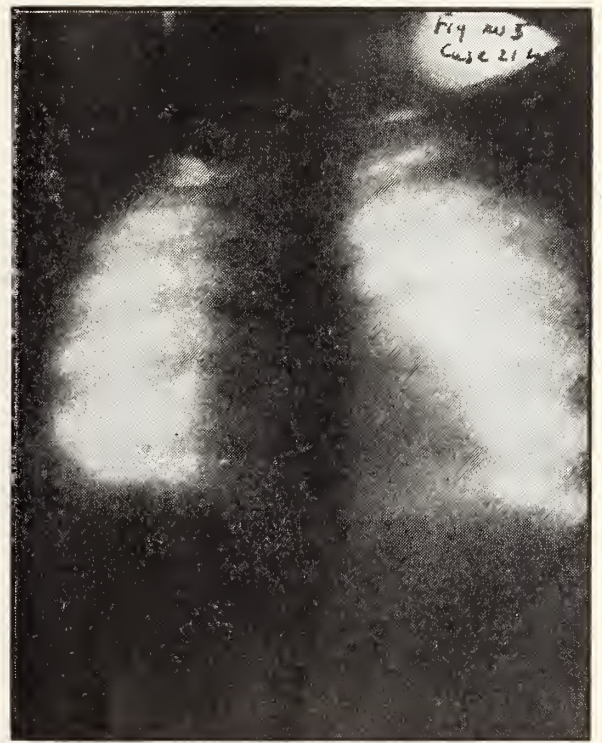
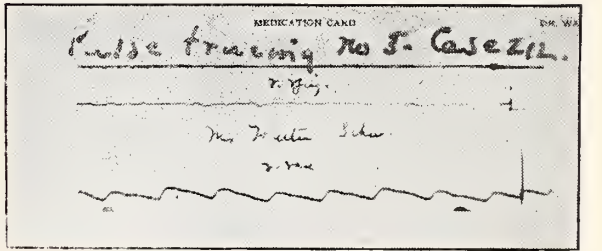


Figure No. 5. Shows enlargement in the aortic area. Under fluoroscopic examination this was shown to be due to hyper-elasticity of the aorta and not to aneurysm. (Case No. 212).



Pulse Tracing No. 5. Shows a regular pulse in a case of non-specific aortitis. (Case No. 212).

was not audible. In three cases there were no audible murmurs. In one case only was the pulse rate over 100. Arrhythmia was present in but one case, and was of the sinus arrhythmia type. In the specific cases the chief complaint was a shortness of breath, while in one there was marked angina which did not respond to treatment with morphine in heavy doses. In

the non-specific precordial pain was present in six cases, and was usually persistent. Shortness of breath on exertion was marked in two cases. In this type premature beats occurred in two cases. As to treatment in the luetic cases, neosalvarsan was used in small doses but was not especially helpful. In one case, a colored male, Wasserman positive, the blood pressure being 170 systolic, diastolic 110, the urine sp. gr. 1014 alkaline, albumin XX, coarse granular casts, mixed treatment was used. Within three months the systolic fell to 135, diastolic 85, and the pulse rate dropped from 92 to 82, and the patient's dizzy spells ceased. In passing we

the average systolic blood pressure was 142, the extreme limits being from 105 to 192. The average diastolic blood pressure was 91, the limits being 65 to 125.



Figure No. 6. Shows aneurysm of the ascending aorta. (Case No. 227).

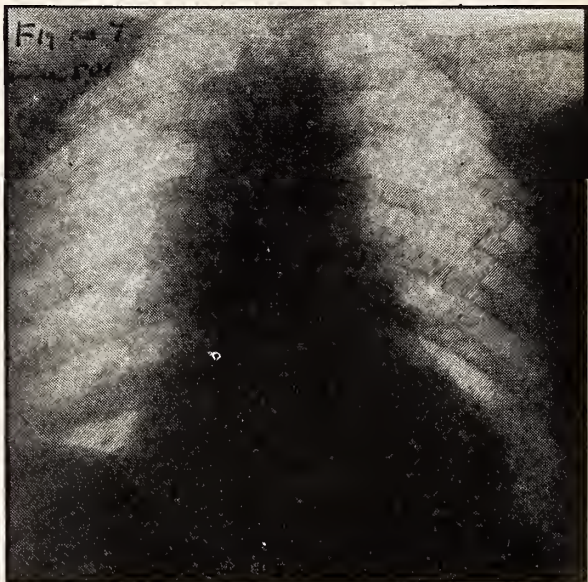
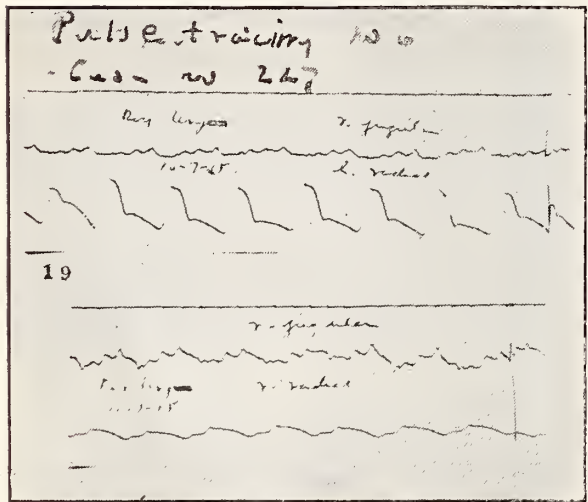
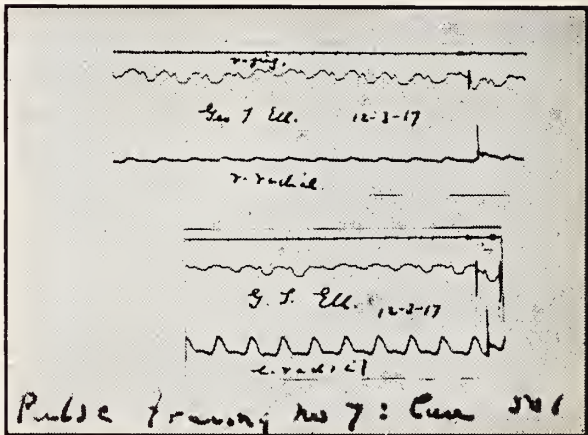


Figure No. 7. Showing aortic aneurysm. (Case No. 501).



Pulse Tracing No. 6. Shows difference in the radials in a case of aortic aneurysm. (Case No. 227).



Pulse Tracing No. 7. Shows difference in radials in a case of aortic aneurysm. (Case No. 501).

Tables IV. and V.

Figure 4 and pulse tracing 4 should appear in body of text on Aortitis, also Figure 5 and pulse tracing 5.

TABLE NO. 4.
AORTITIS.
Specific.

Case No.	Sex	Age	Pulse	S.B.P.	D.B.P.	Arrhythmia	Oedema
194	Male	43	64	142	100	None	None
226	Male	35	92	170	110	None	None
229	Male	36	58	135	85	Sinus type	None
465	Male	44		140	85	None	None
38	Male	50	106	215	100	None	None
56	Male	33	78	128	80	None	None
80	Female	45	70	152	110	None	None
84	Male	48	76	150	80	None	None
94	Male	34	72	175	110	None	None

Dr. Walter J. Wilson, Jr.

may say that in the specific cases the systolic blood pressure varies from 128 to 215, the average being 156. Diastolic varied from 80 to 110, the average being 95. In the non-specific cases

TABLE NO. 5.

		AORTITIS.							
		Non-Specific.							
Case									
No.	Sex	Age	Pulse	S.B.P.	D.B.P.	Arrhythmia	Oedema		
58	Female	30	86	150	100	None	None		
66	Male	21	110	152	100	None	None		
83	Male	27	72	106	65	None	None		
150	Male	27	74	142	70	None	None		
160	Male	56	60-65	135-160	80-90	None	Slight		
212	Female	22	76	125	75	None	None		
275	Female	30	74	105	75	None	None		
426	Male	54	63	154	100	Occasional premature auricular beat.	None		
476	Female	47	74	192	125	None	Present in legs.		
97	Male	51	96	155	115	Few premature beats.	None		

Dr. Walter J. Wilson, Jr.

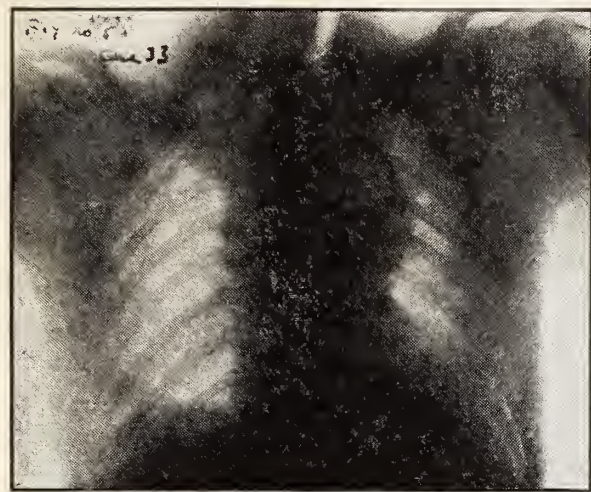
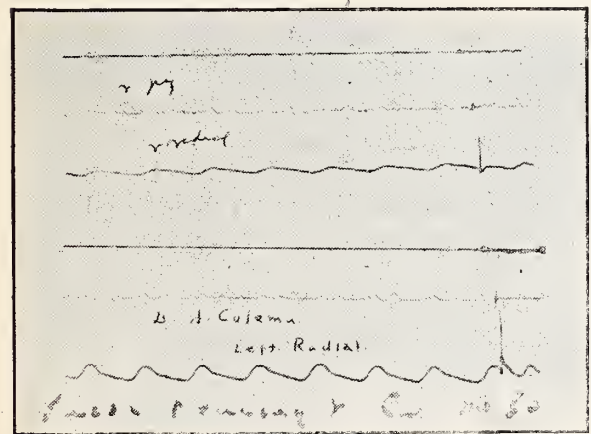


Figure No. 8. Shows extensive aneurysm of the aortic arch. (Case No. 33).



Pulse Tracing No. 8. Shows difference in radials in a case of aortic aneurysm. (Case No. 33).

AORTIC ANEURYSM.

The six cases of aortic aneurysm were all in males. The age limits were from 30 to 51, the average age being 41 years. Blood Wassermans were positive in all the cases. The pulse rate varied from 76 to 122, the latter patient coming on account of the tachycardia. The average pulse rate was 94. The blood pressure ran from zero in one case, in which no right radial pulse

was palpable, to a systolic of 180 in another case. Except in a case in which the systolic blood pressure was 110, there was a divergence of the blood pressure in the right and left arm. In case No. 106 for instance, the blood pressure in the right arm was systolic 82, while in the left arm it was 150. There was usually a slight variation in the diastolic blood pressure. Arrhythmia was present in none of the cases, nor was oedema. The diagnosis was made either on the presence of a pulsating mass which could be palpated above the sternum, or marked dulness in the first and second spaces on percussion. In all of the cases there was a marked difference between the two radial pulses. Aortic regurgitation was present on the first examination in two cases, in one case it developed while the patient was under observation. Aortic second was clear in the others. From the time of the first infection until examination and discovery of the lesion, was in three cases, fifteen years. In one case the previous venereal history showed gonorrhea in 1913, the lesion being discovered in 1915. In one case seven years ensued, while in the other case gonorrhea occurred in 1909, syphilis was diagnosticated in 1913 and aneurysm was found in 1917. In three cases tracheal tug was present, and in one voice changes were apparent. Skiagraphy gave us clear findings in all of the cases. Two cases are dead, two have passed from observation and two are known to be living. Salvarsan seemed to be beneficial in one of the cases. In one of the cases who had presented spinal symptoms in 1913 and had received most vigorous treatment intraspinally and intravenously with salvarsan, despite this fact aneurysm developed four years later. Mercury and the iodides were also used in all the cases.

Table VI.

- Figure 6, Pulse tracing 6.
- Figure 7, Pulse tracing 7.
- Figure 8, Pulse tracing 8.

Should appear in body of text on Aortic Aneurysm.

TABLE NO. 6.

		AORTIC ANEURYSM.							
Case									
No.	Sex	Age	Pulse	S.B.P.	D.B.P.	Arrhythmia	Oedema		
33	Male	34	84	102	70 r. arm	None	None		
				95	80 l. arm				
106	Male	50	106	82	68 r. arm	None	None		
				150	80 l. arm				
227	Male	30	83	180	160 r. arm	None	None		
				168	118 l. arm				
431	Male	47	96	110	not obt. r. arm	None	None		
				110	90 l. arm				
501	Male	35	122	145	90 r. arm	None	None		

Dr. Walter J. Wilson, Jr.

CONCLUSIONS.

From a study of these cases we believe that the aorta deserves a great deal more attention from clinicians than it has heretofore received, and that while the importance of syphilis as a causative factor should not be minimized, that other types of infection are very frequently present, a fact which so far has evidently escaped the attention of the majority of medical practitioners.

BRACHIAL AND FEMORAL PRESSURES
IN AORTIC INSUFFICIENCY.

W. F. KOCH, Ph.D.

The marked difference in femoral and brachial blood pressures of aortic insufficiency has, so far as I know, evaded explanation. Yet as will be seen from the following discussion, it is dependent upon very simple physical facts, facts which indeed give this pressure difference a diagnostic and a prognostic value in other conditions, for example, surgical shock.

The circulation in aortic insufficiency differs greatly from the normal in the rates of systolic and diastolic blood flow, and likewise in the difference between systolic and diastolic pressures. The onward diastolic flow in the vessels is either greatly reduced or may even be nil. It is generally recognized that there is in diastole a back flow from the aorta into the heart, and it has been proven that there is a back flow from the capillaries into the arteries. Now since a back flow from the capillaries to arteries exists in the latter part of diastole, we may conclude that the elastic diastolic recoil of the arteries which normally tends to equalize the systolic and diastolic pressures and continue the onward flow of blood in diastole, is expended in aortic insufficiency before the end of diastole is reached, and therefor at this period the onward flow comes to a standstill. The systolic flow must therefor be greatly increased to compensate for this pause, in order to maintain a sufficient blood supply to the tissues. Of course the systolic and diastolic pressures are proportional, and the extent of the changes depends upon the degree of the valvular insufficiency.

As will be seen from the following discussion, it is this increase in systolic rate of flow through the aortic arch that determines the difference in femoral and brachial pressures. When fluid flows from a large tube into its branches the quantity flowing through the branches and velocity pressures vary with the

sizes and directions of the branches. Thus a tube with two branches of equal size which are directed from the main tube at equal angles will supply to each branch an equal flow under equal pressures. But when one branch is smaller, and proportionately as it is directed away from the direction of the flow through the main tube, the flow and pressure in the small branch becomes less, and indeed may become negative. Moreover the drop in pressure in this branch increases as the mass velocity in the main tube. Now exactly this suction effect is developed at the openings of the upper aortic branches, the innominate, the subclavian, and carotid, etc.

The branches at the lower end of the aortic tree on the other hand are of equal sizes and given off at equal angles which deviate comparatively little from the direction of the aorta, hence here the suction component has very little chance to develop, and the pressures in the branches must approach the aortic pressure itself. Moreover the mass velocity of blood passing the upper aortic branches is greater than that passing the lower branches by a quantity equal to that supplied to the viscera, and this quantity is very large.

In order to test the foregoing considerations, observations were made upon an apparatus constructed to simulate as closely as possible the anatomical structures concerned. Mercury manometere were connected with the aortic arch to measure the driving pressure, with the brachial and femoral also to measure their pressures, while a flow was distributed through the various branches proportionate to that which occurs in the body. Thus the head received 300 cc., the arm 100 cc., the leg 200 cc. and the viscera 500 cc. per minute. Under these conditions, with a driving pressure of 50mm. Hg. the brachial pressure was 2 mm., and the femoral pressure 40 mm. Hg. With a driving pressure of 35 mm. Hg. the femoral pressure is 27 mm., and the brachial 0mm. Hg. Yet the flow through the various vessels is proportionate. By increasing the driving pressure to 57 mm. the femoral pressure is raised to 45 mm. and the brachial pressure to 3 mm. Hg. Now the pressure in the branches of the tube may be resolved into two components, that tending to drive fluid into the branch, and that pressure tending, by virtue of the mass velocity flowing past the branch, to such fluid from the branch. And as was stated above, this suction pressure depended also upon the size and direction of the branch. The conditions are attained for a higher femoral than brachial pressure, if it can

be shown that by increasing the rate of flow through the aorta, the suction pressure at the upper aortic branches increases about as rapidly as that pressure which tends to drive blood into these branches, and that the suction pressure does not develop in the lower aortic branches as was claimed in the above discussion. The experiments referred to, prove these points exactly. Since on increasing the driving pressure from 35 mm. to 57 mm. Hg. the femoral rose from 27 to 45 mm. Hg. and the brachial from zero mm. to only 3 mm. Hg. Thus the femoral pressure increases about six times as fast as the brachial pressure, when the velocity pressure is increased in the aorta.

This increased velocity pressure occurs wherever there is a large pulse pressure, and the conditions determining it are, a moderate vasodilatation, large systolic cardiac output, stiff arteries and hypertension. The vasodilatation must not increase the capacity of the vascular system so much as to interfere with the return of the blood to the heart. A large systolic output occurs with a strong heart and with the moderate vasodilatation, or as a compensatory phenomenon. Where there is loss of elasticity of the vessel wall as in arteriosclerosis, and proportionately as the pressure in the vessel goes above 110 mm. Hg. (the point of maximum elasticity of the vessel wall) the lateral pressure in the vessel drops and the velocity pressure increases.

The diagnostic significance of a higher femoral than brachial pressure is therefore not specific and simply points to a more rapid systolic flow of blood, as may occur with a moderate vaso-dilatation, hypertension, arteriosclerosis or in cardiac compensation and in aortic insufficiency. It means that the heart is performing its work well under the circumstances.

HEART RATE IN SYPHILITIC AORTITIS.

The syphilitic lesion is characterized by an infiltration that shuts off the tissue nutrition through peri- and endarteritis. Thus the nerve endings in the tissue attacked are killed off and the area becomes anaesthetic. Now the arch of the aorta is supplied by the sensory Depressor nerve. Its endings are normally stimulated by the stretch put on the aortic wall by the pressure inside. When the aortic pressure rises above 130 mm. Hg. the depressor endings are considerably stimulated, and the vagus and the vaso-dilator centers in the medulla correspondingly stimulated by these depressor impulses. The result is a reflex inhibition of the heart

rate and a general vaso-dilatation. Consequently a drop in blood pressure and slowing of the heart occurs. Now as a result of aortic degeneration these normal depressor impulses are not generated, the vagus center receiving fewer impulses becomes hypo-tonic and the heart rate speeds up. Likewise the high blood pressure in some vascular diseases must be related to lack of tonus of the vaso-dilator center resulting from aortic degeneration. Conversely for a short period in the earliest stages of aortic disease, while the depressor endings are being starved out, degenerative changes in them must excite them, the vagus tonus thus being increased and a slow heart rate results. I do not know whether such a slowing of the heart rate has been identified with early aortic disease. But if looked for it should be found, and prove to be as valuable a factor in early diagnosis as the increased heart rate is in late aortic disease.

DISCUSSION.

DR. A. W. CRANE of Kalamazoo in discussing the paper called particular attention to the electro cardiographic diagnosis of Specific Aortitis. Dr. Collins H. Johnston, Grand Rapids mentioned the fact that, aortic regurgitation could be practically diagnosed by the Corrigan pulse alone which could always be felt by simply laying the palm of the hand upon the dorsum of the patient's foot.

FIRST LIEUTENANT L. L. CRAVEN stationed at Camp Custer said that Aortic Regurgitation was quite common among men of draft age. He stated that a large percentage of the aortic disease cases among the negroes at Ft. Riley were specific. In the diagnosis was a marked difference in the Systolic and Diastolic Blood Pressure especially when nephritis was present.

DR. WILSON in closing said that a careful history should be taken and that one should not be afraid to examine thoroughly.

CYSTITIS.*

WALTER LENEHAN, M.D.,
BAY CITY, MICHIGAN.

Cystitis is a term loosely applied to all conditions occasioning pain in the region of the bladder. It has long been a convenient term to cover a multitude of sins. Acute prostatitis, acute seminal vesiculitis, and acute gonorrhoeal posterior urethritis are often called cystitis. None of these diseases is in itself cystitis. A true gonorrhoeal cystitis does not exist, but one would think so from the number of times we hear that diagnosis made.

By the term cystitis, we mean inflammation

*Read at the Gratiot-Isabella-Care County Society meeting, November 15, by Walter Lenehan, M.D.

of the bladder tissue as a result of bacterial invasion. In such inflammation we must always have pus in the urine and occasionally blood. Bacteria gain entrance to the bladder wall by four different routes: the urethra, the kidneys, one of the different organs in close proximity to the bladder wall, and through the blood current. Bacteria in the bladder do not always produce cystitis. Such a condition is known as bacteriuria.

Idiopathic cystitis does not exist. It is true that the cause and source of bladder infections are often difficult to find, but, in every case of a true cystitis, we must have bacterial invasion with pyuria, for cystitis is always a secondary process.

In determining the cause of a supposed cystitis, we must distinguish between those diseases or conditions outside the bladder which cause symptoms similar to those of cystitis, but where the bladder is not in any way involved—a false cystitis; and those other diseases or conditions which are situated in or about the bladder which have caused a bacterial infection of its lining membrane, and result in a true cystitis. We may, of course, have several sources of a cystitis in one patient. For example, in tuberculosis, one or both kidneys, the seminal vesicles, prostate, and epididymis, may be involved at about the same time.

Etiology. We may divide the causes of cystitis into predisposing and exciting.

There are numerous conditions which may act as predisposing causes to cystitis, although they may exist indefinitely without actually causing inflammation. The one most frequently met is the retention of residual urine, occurring in cases of stricture and enlargement of the prostate, or resulting from the paralysis of the nerve supply to the bladder, depending upon a fractured spine or a myelitis. Retained urine of itself can not cause inflammation so long as the bladder remains free from micro-organisms; but stagnant urine affords an excellent culture medium for germs which may be introduced into the bladder, and the retention, if long, continued, impairs the vitality of the mucous membrane by keeping it congested.

Exposure to cold may act in an indirect way by lowering the vitality of the tissues, so that germ infection may the more easily take place.

Calculus, prostatic enlargement and pregnancy may cause a chronic congestion of the mucous membrane without the presence of retained urine.

So long as the cells of the mucosa are intact,

the normal bladder epithelium offers a barrier to the invasion of micro-organisms; but if the bladder walls are congested for some time the superficial cells are loosened and desquamated and the softer cells underneath are exposed, allowing the entrance of germs. The hyperaemia also causes the small blood vessels to rupture, on account of the increased vascular pressure.

The exciting cause of a cystitis is invariably micro-organisms. Normal urine is an aseptic fluid, free from germs. Various forms of cocci and bacteria are always found in every case of cystitis.

Many of these organisms are incapable of causing cystitis in a normal bladder, which can completely empty itself, because they are passed out with the urine, before they cause any trouble, but the staphylococcus pyogenes, urobacillus liquifaciens septicus, and virulent cultures of the bacillus coli communis, by virtue of their power to break up urea and form ammonia, can, of themselves, excite a cystitis, without the aid of a favorable predisposing cause.

The micro-organisms most usually found in cystitis are the bacillus coli communis, streptococcus, pyogenes, urobacillus liquifaciens septicus, and staphylococcus.

Moullin found the following results in examining the urine from thirty cases of suppurative cystitis, most of which were in old men with enlarged prostates:

Reaction—acid or neutral in twenty-four and alkaline in six.

The bacillus coli was present in twenty-one of the acid urines and in four of the alkaline, twenty-five in all cases.

Streptococcus pyogenes was found in four acid and three alkaline urines—seven in all the cases.

Urobacillus liquifaciens septicus occurred in five of the alkaline urines.

The staphylococcus was present in eight cases, and an unidentified diplococcus in two cases.

You will see from the above statistics that the bacillus coli is the organism found most frequently in cystitis with acid urine, and the urobacillus liquifaciens when the urine is alkaline.

The bacillus coli, except in virulent cultures, has but little effect in causing the urine to become alkaline, and it may remain acid for a considerable length of time. Cultures may even be injected into the bladder without caus-

ing cystitis, unless there be present some predisposing cause.

If, however, the *urobacillus liquifaciens* gain access to the bladder, cystitis will almost invariably follow, because of its power to decompose urea and set free ammonia, which acts as an exciting cause for the inflammation.

The *streptococcus pyogenes* and the *staphylococcus pyogenes aureus* are both capable of causing a diffuse suppurative inflammation if they attack the bladder walls.

The *streptococcus* does not decompose urea and, if found in an alkaline urine, the decomposition has been affected through some other organism—usually the *urobacillus*. Therefore, we see that, while all cases of suppurative cystitis are produced by these or similar organisms, it can not be induced by their mere presence, so long as the bladder can be completely evacuated and its walls are in a healthy condition; and that the *urobacillus liquifaciens* alone is capable of exciting cystitis in a normal bladder.

If, however, we have residual urine in the bladder, or if the bladder wall is congested or eroded, cystitis will surely follow the introduction of the other forms of organisms.

We sometimes hear the term simple cystitis, by which, according to Morton, "is understood the inflammation of the bladder which is not caused by germ infection, but which results from a mechanical cause, such as the irritation from a calculus or crystals in the urine or from a chemical irritation caused by cantharides. Simple cystitis exists as a theoretical condition only, for, as a matter of fact, the complication of germ-infection occurs in every case, and in a few hours the bladder becomes infected with micro-organisms, and the simple inflammation is converted into suppurative cystitis."

Pathology: The pathologic changes are most marked in the region of the trigone and particularly so around the orifices of the ureters and the urethra. The fundus is nearly or quite normal.

The mucous coat is the part most usually involved, but all the coats, even the serous, may be involved.

In acute cystitis, we find the mucous membrane of a brilliant scarlet color, with branching distended blood vessels, which bleed easily. The polish of the mucous membrane is lost, and is ragged and velvety, with flakes of lymph adhering to it. In severe cases, we will find erosions due to the detachment of epithelium.

In very septic cases portions of the mucous

membrane slough away, and hang in shreds from the bladder walls. Minute abscesses may form in the submucous and muscular coats. The urine is filled with micro-organisms, and they lie on the surface and between the epithelial cells of the bladder.

The changes in chronic cystitis resemble those of the acute form, but are more marked. The erosions are deeper, and sometimes result in actual ulceration. The mucous membrane is black or slate colored, from the escape of blood-pigment into the tissues through small capillary ruptures.

In the early stages the muscular coat may undergo a true hypertrophy of its fibers, but, as a rule, the prolonged inflammation and the vascular degeneration lead in time to a condition of fibroid induration and sclerosis of the bladder wall. The walls are thicker and denser than normal and their elasticity is entirely lost. As a result of those conditions the cavity of the bladder often becomes so small and contracted that it can only hold a few ounces. The bladder wall on contracting falls into folds, with spaces between them, from which it is difficult to empty the urine, even with a catheter.

In time the spaces become stretched, forming sac-like dilations, which may be as large as the bladder itself. These sacs are only covered by serous membrane, and have no muscular fibers, so that they can not empty themselves of their contained urine, and, being filled with stagnant decomposing urine, they become a favorite seat for stone formation.

Membranous Cystitis: As a result of intense septic infection of the bladder, combined with pressure on its blood-vessels, sufficient to shut off the circulation and cause gangrene, a false membrane may form within the bladder, which is thrown off as a coat of its walls.

The microscope shows these coats to be composed of epithelial cells, lymph, urinary salts, and micro-organisms entangled together.

This slough may make its exit through the urethra, or the whole thickness of the bladder wall may slough into the cavity of the abdomen.

Symptoms: As I have already consumed considerable time, I shall pass the symptomatology with a few brief remarks. Frequent and painful miction, together with pyuria and haematuria, are the cardinal symptoms.

The constitutional symptoms are caused by the absorption of toxins, and their severity depends upon the amount of poison absorbed, and the rapidity of absorption.

If the bladder can empty itself rapidly, absorption does not take place to any great extent and vice versa.

In chronic cystitis the constitutional disturbance is slight, because there is very little absorption of toxins from the bladder. But if an acute cystitis is ingrafted upon a case which has suffered with chronic inflammation, and some organism which is capable of decomposing urea enters and ammonia is formed, then the tissues, which have been altered by long continued inflammation, respond violently to the irritant, the kidneys become involved, and septic poisoning follows.

Treatment: In acute cystitis, the patient should be put to bed, given a light milk diet, and given a brisk purge.

Hot sitz-baths, diluents, the balsams, and urinary antiseptics should be administered. Opium and belladonna should be given to control the pain and tenesmus.

Autogenous vaccines may be useful in *certain* cases.

The only local treatment that can be used without doing harm, is instillations of Silver Nitrate to the posterior urethra, by means of an Ultzmann syringe.

In chronic cystitis, we must remove any local source of irritation within the bladder or any obstacle to its evacuation; remove the urine from the bladder and keep it empty, even if we have to resort to permanent catheterization, and wash the bladder out once a day with Silver Nitrate—solutions—1:4000 up to 1:1000.

If there be fungosities, they should be cured away.

Remarks.

IMPROPER TREATMENT OF ABORTION.

JAMES E. DAVIS, A.M., M.D.,
DETROIT, MICHIGAN.

The title of this paper involves an indictment of the profession. The premises for the conclusion that this is warrantable are easily stated after one has considered the readily available data and statistics concerning the pathological events and changes of the child-bearing period in women.

The strongest evidence against the physician that abortion is improperly treated is presented by the following facts:

1. Self induced cases and those induced by physicians are numerically about equal.
2. Success in a first abortion encourages

rather than refrains the mother, father, meddling friend and physician from participation in successive attempts.

3. Untreated syphilis in the child-bearing period is **very common**.

4. Uncorrected pelvic pathology in those who have previously aborted is exceedingly frequent.

5. Untreated cases of disturbed renal functions are common.

The creation and maintenance of a correct conscience in certain physicians, mothers and influencing friends may perhaps be most efficiently accomplished by a well emphasized appeal for better racial preservation and an improved health maintenance of the female during and after the child-bearing period.

It is certainly an opportune time for any appeal which has in it the ultimate aim of life production and life preservation. The destruction and desolation of the recent war will promote at least a keener economic interest in the subject under discussion.

The frequency of abortion has been variously estimated as 15.4 per cent. of all pregnancies Franz, 19.2 per cent.; Malins, Taussig 25 per cent.; while De Lee states that almost half of the child-bearing women have had an abortion before the thirty-fifth year. So large are these percentages that they can no longer be passed over lightly by the general practitioner especially since Jacobs states that 50 to 60 per cent. of all gynecologic patients date the onset of their illness from an abortion.

The mortality in reported cases of abortion is 9.75 times greater than in confinements. It is perhaps safe to assume that upwards of 70 per cent. of all abortions are criminally induced.

To argue that the indifference of the medical profession to the subject of abortion arises from the attitude that it is an inevitable event is wholly unwarranted. In the face of the foregoing facts alone we must conclude that the majority of cases of abortion are preventable.

The cases to which the appeal of church or priest or criminal law does not reach may be expected to pay attention to an emphatic portrayal of the pelvic pathology following abortion. To this may be added that an abortion will destroy for all time at least 40 per cent. of the possibility of bearing living children.

Royston has found that 41 per cent. of a series of cases studied by him were more or less permanently disabled by the effects of criminal abortion.

Prophylaxis of abortion if neglected is the

greatest factor in the improper treatment of this condition and the most potent therapeutic measure to be employed is that of teaching the full consequences of abortion pathology.

The second most important consideration arises from the failure to detect syphilitic infections. The ideal prophylaxis should require every woman contemplating procreation to have satisfactory clinical and serological evidence of no existing infection. Cases presenting positive evidence should be given prompt and efficient anti-syphilitic medication. It should be imperative that patients having had one abortion should be subjected to a serological test.

The assumption that syphilis is usually responsible for well advanced miscarriages and premature labors only, is very misleading and out of harmony with well prepared data upon this subject.

Miller states that most conceptions occurring in syphilitic women terminate in the first month. Gow contends that abortion in syphilitic women is quite common about the third month and these views coincide with Royston's observations. Royston further reports that one-fourth to one-third of his entire abortion material was syphilitic; 73.9 per cent. being latent syphilis. In 115 abortions due to syphilis 61.4 per cent. occurred during the first three months, 22.6 per cent. from the fourth to the sixth month while only 15.6 per cent. resulted after the sixth month. Warthin whose conclusions are drawn from extensive tissue studies believes that fully 50 per cent. of abortions are from leucic causes and asserts that the Levaditi stain, to successfully exhibit the spirochete pallida, must be used upon material within a very few hours after death. In connection with the effect of syphilis upon pregnancy, the statistics of Le Pileur are particularly instructive. Le Pileur examined 130 women, some of whom gave birth to children before their infection and others after their infection. Among these same women before syphilitic infection occurred, 3.8 per cent. aborted as compared with 78 per cent. after infection. Where 48.8 per cent. survivors were born before, only 5.2 per cent. survived after syphilitic infection.

After criminal induction and syphilis the most important positive factors are pathological changes involving the endometrium, uterine displacements, fixations and infections. To properly provide against abortions immediate and thorough treatment of these conditions should be instituted. In this relation it is to

be remembered that abortion is a most frequent and usually constant causative factor for endometritis, displacements, fixations and infections. Perhaps more should be said in regard to neglected treatment of incomplete abortion than upon any other phase of this subject. It is common practice for the medical adviser to accept the patient's report that her abortion is complete and the case is dismissed without further observation until a composite of chronic symptoms are presented which have dated from the last abortion. If excellent evidence can be presented that in some of our best clinics the routine gynecological material has positive evidence of old abortions, complete and incomplete, to the extent of 17 per cent. where the condition was almost wholly unsuspected we must conclude that the total number of neglected cases needing immediate care must be very large. The writer has recently studied 474 consecutive gynecological cases by pathological examination of pelvic tissues consisting of curettings, excised portions of uteri and fallopian tubes and unresolved decidua, chorion or other evidence of recent abortion was found in 17.29 per cent. of the series. These cases were undiagnosed in regard to the condition of abortion.

The best result must come in the treatment when all cases are given the benefit of careful observation fully equal to that of a well cared for pregnancy at term or of that demanded by a major surgical procedure. If evidence is obtained of incomplete abortion the uterus should be promptly emptied. We do not believe it is a good procedure to dilate the cervix by using the uterine gauze packing. If the period of gestation has been less than 10 weeks the cervix should be dilated with branch dilators and the uterine contents removed with placental forceps supplemented with gauze upon long forceps which is made to rotate and clean the endometrium. The gloved finger should be used for exploration if the cervix will permit or the sharp curet may be used with extreme care for removal of adherent tissues. In cases beyond 10 weeks or those in which the uterus is very soft and dilatable the placental forceps, gloved finger and gauze rotator should only be used. If gauze is left in the uterus after it is emptied post operative temperature will be more frequent. The application of some one of the silver salts or a weak solution of iodine to the entire uterine canal is advisable.

It is an important mistake to proceed in the surgical care of an abortion without having first shaved the entire vulva and prepared the

surface as would be done in any surgical field prepared for a major operation.

In conclusion, emphasis should be given to the importance of this subject. (2) A very much closer attention should be given to prophylaxis. (3) Threatened abortions should be treated by extreme rest measures. (4) Incomplete abortion should receive the attention of major surgical operations. (5) Close pathological observations should be made of both gross and microscopic tissue changes and the specifically indicated treatment should be outlined therefrom.

THE EYE IN RELATION TO GENERAL DISEASES.

D. EMMETT WELSH, M.D.,
GRAND RAPIDS, MICHIGAN.

Mr. President:

When we listen to the reading of so many excellent papers that have been prepared for this Society and hear the reports of bacteriological findings and research work, the important roles of X-ray work, the preponderance of luetic conditions, the insidious contagion of the white plague, and the brilliant results of surgery in the relief and care of suffering humanity; we feel as though the last word in medicine had been spoken and that our medical lives trained along these lines would give full medical fulfillment.

Ours is a short life to conquer these mysteries. We must broaden and educate our minds to grasp all of these intricacies to become successful in our chosen fields.

There is a small organ in our economy, though likened unto the window of the soul; whose individuality becomes very often the key-stone in its relationship to general disease. It is a portrayer of mentality, love, fear, anxiety, worry, health, disease, and the ending of life.

Its findings are based upon anatomical law; a prognosticator of health, disease, and death.

The relationship that exists between the eye and general diseases is not at all times considered. Anatomically, it is evident but complex. Its gross anatomy can only be given.

It is situated in the interorbital space. The interorbital space contains peritosteum adipose and connective tissue, eyeball, muscles, blood vessels, nerves and glands.

The periosteum is derived from the dura matter at the optic foramen. It divides the outer from the periosteum, the inner divides

the orbital contents into different compartments.

The capsule of tenon forms the oculo orbital fascia, ensheaths all the organs that pass through it, forms an acetabulum for the eye and is continuous with the optic nerve. The nerves are optic, motor-oculi, abducens and pathetic. Branches of the ophthalmic divisions of the fifth filaments form the cavernous plexus of the sympathetic, ophthalmic, lacrimal, long and short ciliary, ethmoidal, super orbital, and retinal arteries.

The eyeball is suspended in space. Its contents are composed of 99 per cent. water, 1 per cent. salts, extractives, and a trace of albumen. Lymph comes from the lymphatic spaces of the uveal tract and perinuclear lymph channels, and the blood from the blood vessels.

The interocular fluid comes from the secretion of the epithelial covering of the ciliary body and the aqueous and vitreous. Its tension is maintained by the central sympathetic and unimpeded flow through the filtration angle. The tension is equivalent to a column of mercury 25 mm. high. From without we have the conjunctiva ocular and palpebral, cornea, anterior chamber, iris, pupil, capsule, lense, choroid, retina, sclera, aqueous and vitreous humor.

The external diseases of the eye are associated with microbic infections, and tubercular and luetic conditions. Iritic inflammations that were formerly thought to be 70 per cent. luetic, 20 per cent. rheumatic and 10 per cent. other causes, have now been changed.

Rheumatism like malaria will become a thing of the past and its nomenclature forgotten.

The frontal and ethmoid sinus, teeth, tonsil and gastro intestinal disorders are an important factor. Scleritis follows the same line of reasoning.

Exopthalmic goitre is a systemic disturbance. Faulty conditions of the ductless glands produce important eye characteristics. Cretinism, amaurotic—family idiocy and mongolian epilepsy give rise to corneal and fundal changes.

Diplopia, when there is a tendency to squint or when squinting exists after middle life; it is always central in character and is an expression of systemic conditions. Diplopia may be due to paralysis, sclerosis, Frederick's disease, locomotor ataxia, or tumors of the brain.

The pupil showing inequality of size—small, large, or irregular without the use of atropin is dependent upon central disturbances. The normal size of the pupil equals 4 mm. One

pupil dilated portrays paralysis, aneurism of the aorta, plural effusions, tubercular meningitis, and tumors of the brain. Both pupils dilated portrays anemia, aortic regurgitation, apoplexy, paralysis, meningitis, and thrombus of the lateral and cavernous sinus. Contracted pupils portray heart lesions, and **general nervous conditions**. Hemenopic pupils portray acromegalia, abscess of the brain, tumors of the chiasm, tract, lobes and pituitary body.

Nystagmus is an oscillatory movement of the eye. It is not a disease in itself but with its associate symptoms have an important relationship to cerebellar abscess, tumors, amaurosis, hemorrhages, meningitis, choroidal diseases, sclerosis, and thrombus of the lateral sinus and optic nerve degeneration.

Our equilibrium is maintained by our static labyrinths, orientation and complete muscle balance. A disturbed function of the nervous pathway from a non-static labyrinth with the ocular balance will produce a static disturbance recognizable by nystagmic movements.

The early recognition either of the manifest or latent form is extremely important at the present time.

It is probable that more of the accidents at the aviation schools are not so much dependent upon faulty air plane construction or the occurrence of accidents in the air as upon this disturbed orientation ocular imbalance.

FUNDUS.

The fundus now gives us attention. It is here that the beauties with the ophthalmoscope are portrayed. As law is founded on definite principles, so the fundus gives us absolute anatomy which is positive and its interpretation depends on the observer. The ophthalmoscope gives a magnification of twenty diameters. The nerve head is about 1-16th of an inch in diameter and the vessels vary from 1-60th to 1-40th of an inch in diameter, hence the appearance after this magnification is clear.

All cases of retinal inflammation except glioma and detached retina are dependent upon systemic conditions. Here comes into play the findings of the ophthalmoscopic picture which shows the vessels, contractions, dilatations, terminal twigs, course, their passage over each other, their passage over or below diseased areas, their tortuosity, stripes, hemorrhages, shapes, locations.

Forty per cent. Bright's and 25 per cent. diabetics are characterized by hemorrhages. Leukemia in a small percentage is character-

ized by hemorrhage also and pathognomonic in appearance.

The optic nerve is a prolongation of the gray matter of the brain and its envelope dural-arachnoid and pial sheaths. Wherever morbid process excites an inflammation of the optic nerve takes place. Its ophthalmoscopic picture is the same as it reacts to the same anatomic change, be it infection, autotoxic sinus diseases or faulty metabolism.

All cases of inflammatory conditions tend to atrophic change. Of the infections variety syphilis stands prominent. Tabetic condition is the cause of at least 40 per cent. and progressive paralysis about 5 per cent. Prior to atrophic change the inflammatory condition takes on different forms which is readily recognized. The nerve head appearance is very characteristic.

Choked disc. All inflammatory conditions of the nerve head in which an elevation is at or above three diopters is a choked disc.

This is synonymous with cerebral disturbance, either tumor or pressure symptoms. The size, form or location can not be given. Neurotic research and neurologic surgery has given this great importance. Thus an early symptom has prevented a number of cases from becoming completely blind by relieving the ventricles of **the pent up contents**.

Sight is a light wave converted into a nerve impulse. Conscious vision is brought about through the primary optic ganglia consisting of the anterior corpora quadragemina pulvinar of the optic thalamus and external geniculate body by their interchange with each other. Co-ordinate movements are presided over by the corpora quadragemina. Pupillary reactions are produced through the Edinger Westphal ganglion, and the movement is controlled by the motor-oculi, abducens, and pathetic nerves. The center of visual impression is the cuneus, and its store house is the anterior occipital convolution of the hippocampus major. From this complex system we enter upon the general nervous force of our economy and through the association with the brain stem consisting of the medulla oblongata corpora quadragemina and cerebral peduncles it develops the interrelationship of the eye from an anatomic and physiological standpoint.

The physiological characteristic determines the clinical character of its lesion as disturbance of function in areas of origin of the cranial nerves are positive factors of all affection of the brain stem.

The nuclear organ of the cranial nerves except the optic and olfactory come off close to and in the floor of the fourth ventricle. Their fibers complex or follow a direct or circuitous course.

In the floor of the fourth ventricle lie the sensory track of the upper and lower extremities constituting the fillet. This is made up of bulbo thalamic tracts connecting the nerves of the dorsal column. They form afferent channels for deep sensibility and tactile impressions. The short fibers of the posterior roots terminate in the dorsal horn to which spinothalamic tracts connect themselves and pass to the optic thalamus and mix with the bulbo thalamic tract conveying conscious painful and thermic sensations.

With these anatomic points given, the complex condition and the systemic association of the eye in relation to general disease is brought about. Therefore, we can not consider it an individual unit but consider it as a compound element, an integral and basic condition of man's concept.

A CASE REPORT OF HEMORRHAGE IN THE MIDDLE EAR.

D. E. WELSH, M.D.,

GRAND RAPIDS, MICHIGAN.

The patient is a man thirty-eight years of age who came to my office complaining of deafness and a feeling of fullness in the right ear from which he had been suffering for two days.

His history revealed that he had taken a cold two weeks previous to onset of the symptoms of which he complained with lacrymosis, nasal discharge, and a sore throat. These symptoms were not very severe although the onset was marked by chills and a low temperature. The symptoms of coryza gradually disappeared, then suddenly two days before he appeared in the office he was taken with deafness and pain in the right ear.

Examination of the external auditory canal and ear drum showed retraction of the drum head, and a blood clot extending along the upper quadrant and down into the anterior inferior quadrant. There was no bulging of the posterior drum and no acute inflammatory changes, and no pus.

The case was treated expectantly. The post pharynx and to the eustachian opening an application of 15 per cent. argyrol was used as well as local oil sprays. The deafness and pain gradually subsided and the blood clot was slowly

absorbed. The hearing had become almost normal when about one week subsequent to the first attack he had another hemorrhage in the same ear with identically the same findings. There were no other physical findings outside from the acute respiratory infection that he had sustained that could have accounted for this hemorrhage. The blood pressure was normal and the patient is otherwise in an excellent state of health.

Such a hemorrhage unaccompanied with suppuration is very unusual in my experience. I have seen only two other cases that were at all similar to this one but neither of the other two were cases associated with acute infection of the upper respiratory tract nor did they follow such infection. One case I remember was that of a woman who had fallen down stairs and sustained a severe jar of the spinal column. Another one was due to concussion produced by an explosion.

A CASE OF ANTHRAX.

W. T. DODGE, M.D., F.A.C.S.,
MAJOR, M.C.U.S.A.

CAMP SHERMAN, OHIO.

(Chief of Surgical Service, Base Hospital, Camp Sherman, Ohio.)

M—— Private, admitted to the Base Hospital, September 17, 1918, after ten days in camp. Diagnosis on transfer card, "Infected Sublingual Gland." History of present disease, statement of patient: "First noticed stiffness in both sides of neck, hot and cold flashes commencing on September 15th. A small pimple appeared on point of chin to right of center and a large swelling under chin. The pimple had developed rapidly but was not painful. He was feeling very ill and depressed, but had no elevation of temperature."

Observation disclosed an ulcer on point of chin one-half inch in diameter with a necrotic center and a large tender submental gland. It was obvious that the peculiar appearing ulcer was responsible for the infection and the laboratory was asked to examine a smear. The report came within an hour to the effect that a gram positive bacilli having the morphology of the Anthrax Bacilli was found. His white leucocyte count was 14000, polymorphonuclears 64.

The patient was immediately taken to the operating room and the ulcer removed according to the following technique: The surface was first gently scrubbed with soap and rinsed

with sterile water, then painted with an aqueous 8 per cent. solution of phenol and then rinsed with alcohol; painted with collodion and subcutaneous injection of 8 per cent. phenol made into tissue around the lesion, 60 cc. were used altogether. One-quarter inch outside this zone 120 cc. of 25 per cent. alcohol were injected. The ulcer and tissue one-half inch outside of it was then excised and the edges of wound painted with 95 per cent. phenol and then neutralized with 95 per cent. alcohol. The large wound was left open and kept constantly moist with Ochsner's Solution. Smears for three succeeding days disclosed the Anthrax Bacillus, after which no germs were found except the *Staphylococcus Albus*. The patient

did well from the time of the operation, the swelling of the submental gland rapidly subsided and he made an uneventful recovery. Six days following the excision of the ulcer the wound was closed by a plastic operation, taking a flap from under the chin. Primary union occurred, leaving an inconspicuous scar, most of which is under the chin. He was discharged from the hospital October 8, 1918.

Cultures made from the patient's shaving outfit disclosed colonies of Anthrax Bacilli on the razor blade. Soap, brush, and towel were negative to Anthrax. The shaving outfit was presented to the soldier upon his departure from home for camp.

WORK AMONG INDIANS.

Exceedingly interesting is the following account, quoted from a letter written by the executive secretary of the California Association for the Study and Prevention of Tuberculosis, regarding the health and educational work undertaken by that association this summer among the Indians:

"In August, the state association opened a small clinic in one of the small towns in Fresno County where many Indians are brought in to pick grapes. With the co-operation of the tuberculosis committee, their county nurse was detailed at Clovis in the hospital and with the help of the third year students of the University of California dental school, who provided the equipment, they spent a month working with the Indians, particularly the children. The Raisin Society contributed the money for the expense of the dentists. The nurse and the dentists did a land office business and the whole thing was so successful that the Indian Commissioner set aside \$600 to be placed at the disposal of the state tuberculosis association to continue similar work in the northern part of the state. The state association is paying the expenses of the nurse and the Department of the Interior the salary for a six-months' demonstration. There are no roads in this particular locality where the nurse will work. All of the visits must be made on horseback over trails. This public health work will be done with the emphasis laid on tuberculosis. By the time it is finished we hope to have permanent Indian workers in the state. Already two of the graduates of the Phoenix School have entered tuberculosis sanatoria as tuberculosis nurses hoping to do some public health work as soon as they finish. Arrangements have been made with the director of the Junior Red Cross of the Pacific Division to place a field worker, to work in conjunction with the state association in organizing the Modern Health Crusade among the Indians throughout the state."

EVERY DOCTOR IN THE UNITED STATES

should be interested in encouraging American manufacture of typically American medical products. Let us, by enthusiastic patronage of all-American manufacturers, so firmly establish the American supremacy in this field that there will never be the slightest danger of its passing back to Germany.

One typically American invention is the new war-impregnated open-mesh lace dressing for wounds, burns, bruises, etc., which bids fair to revolutionize the present-day dressing methods.

Careful tests in large industrial hospitals show that by using this lace mesh, 50 to 75 per cent. of the gauze, absorbent cotton, and roller bandages may be saved, as well as hours of the time of surgeons and nurses, not to mention the saving of agony to the patient experienced in the removal of the old sticking, secretion stiffened pad of dressings, for this remarkable dressing DOES NOT STICK.

Just by way of introduction, THE ABBOTT LABORATORIES, Chicago, Illinois, who make this Parresined Lace-Mesh Dressing offer a special outfit containing a box of six envelopes of the Lace-Mesh, an ounce of Dakin's Dichloramine-T, and four ounces of Chlorcosane—the solvent for Dichloramine-T—prepaid to any point in the United States for only \$2.50. They include, without charge, in the shipment, a trial bottle of Chlorazene Dakin's water-soluble, stable antiseptic, and one of Digi-poten, a typically American digitalis preparation, which leaves you no excuse for using the German. (Send for this package to-day, Doctor.) It has the ABBOTT guarantee of purity and accuracy.

The Medical Review of Reviews announces that it has purchased the Buffalo Medical Journal which it will absorb beginning with the January 1919 issue. This is the third publication which the Review has purchased during the past few years.

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

A. L. Seeley, ChairmanMayville
 E. W. TolesLansing
 R. S. BucklandBaraga

Editor and Business Manager
 FREDERICK C. WARNSHUIS, M.D., F.A.C.S.
 On Leave of Absence on Duty
 Medical Reserve Corps, U. S. A.
 D. EMMETT WELSH, M.D.,
 Acting Representative Publication Committee.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to D. Emmett Welsh, M.D., 4th Floor Powers Theater Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

Entered at Grand Rapids, Michigan, Postoffice as second class matter.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 26, 1918.

December

Editorials

GREETING.

Peace is declared and the heart of every true American thrills with joy and thanksgiving. If he has done his full duty, he has also a just feeling of pride in the accomplishment of the glorious results.

The Medical Profession of Michigan, may well be proud of its record. It has promptly filled its every quota of volunteers, and to-day hundreds of Michigan's best and bravest medical men and women are "carrying on" in fields and camps of Europe and America.

There will be no "slacking" among these our Doctor Soldiers, as long as their war service is required.

Back home, in every city, village and hamlet, there are other Doctor Soldiers not wearing uniforms, who have carried on to the full limit of their abilities, financial, moral and physical, to insure the well being of America and to keep

the home fires burning. To these latter a word of encouragement and warning.

We must not now at this most critical time relax to the slightest degree. Our Doctors will be coming home, and in every community the returning one must be given a sincere and hearty welcome. When he went, we as a profession promised him that during his absence we would safeguard his professional reputation and his material interests, and that when he returned he would find that his place had been kept. It is now up to us to make good our promises.

During the period of re-adjustment and reconstruction upon which we are now entering, the Medical Profession will be brought into new and different relations. No person can foresee the problems that will confront us; but whatever they may be we must be steadfast, loyal and helpful Americans, first, last and all of the time. This can only be accomplished by more complete co-operation and more thorough organization. Many County Societies have held but few meetings during the past year or more. The stress and strain of war times seemed to justify this. It is time now however, when as members of a profession which has probably done more than any other to aid in the winning of the war, that we should stand shoulder to shoulder and heart to heart, a mighty force in the glorious work of rehabilitation and reconstruction.

It is hoped that every County Society will have an out-break of the get-together and get-busy spirit and let us all go "over the top."

ARTHUR M. HUME, President.

The Publication Committee wishes to announce that we have been deprived of the valuable services of Doctor G. J. Warnshuis who in the absence of Major F. C. Warnshuis has been acting as Secretary-Editor for the Society.

Doctor G. J. Warnshuis accepted a position in Marmarth, North Dakota, and Doctor D. Emmett Welsh has kindly consented to take charge of the affairs of the office until the return of Major Warnshuis and we all know that

Doctor Welsh always makes good at any work he undertakes.

The County Societies can materially assist Doctor Welsh in the work by making their reports promptly and in detail. We expect in the near future to be able to publish monthly reports from the Clinics of the Detroit Hospital and also to continue with the reports of the University Clinical Society.

How long it will be before our Colonels, Lieutenant Colonels, Majors, Captains, and Lieutenants return to take up their work in civil life we can not tell. That we sadly missed them, and by doing the best possible, their work is largely left undone is self evident.

November 7, 1918.

To County Secretaries:

With so many doctors absent on army duty, it is making it increasingly difficult for us to obtain copy for the Journal. I would therefore urge upon you to take this matter up with the members of your societies to develop a plan for the securing of a supply of papers for publication.

A contribution of any nature will be appreciated, and the earlier the better. Send in your news notes, letters from doctors at the front and in the cantonments, and information in regard to doctors being commissioned or promoted.

Yours very truly,

D. EMMETT WELSH,

Acting Representative of the Pub. Com.

In future county secretaries are requested to send all material for the Journal, and make all checks payable to the Treasurer, Dr. D. Emmett Welsh, 4th Floor Powers Theatre Building where the office of the Journal and Society is now located.

Editorial Comments

Messrs. E. C. Schroeder and G. W. Brett have recently reported the results of an examination of 256 samples of cheese for the purpose of determining the frequency with which

this product is contaminated with virulent tubercle bacilli at the time it reaches the consumer. The general conclusions of these studies are that cheese of the kind that requires some time to ripen rarely if ever contains true, living pathogenic bacteria when it is marketed, while cream cheese is often heavily contaminated with tubercle bacilli of the bovine type. Hence cream cheese should be made either from pasteurized milk and cream or from milk and cream obtained from cows which have been proved free from tuberculosis. Cottage and skim milk Neufchatel cheeses are much less frequently infected with tubercle bacilli than cream cheese, but contamination is frequent enough to indicate that they should not be made of raw milk. This brings us to the conclusion which has already been reiterated from time to time that the public is safeguarded only when using pasteurized milk.

An interesting feature of the present epidemic is the change in the attitude of the public toward public health methods. The changes incident to the war have caused the public to accept freely orders and suggestions as to their mode of living. When health authorities place a ban on public gatherings, when they insist that the windows of public conveyances be kept open, when they insist on absolute quarantine in order to stop the spread of the disease, the public is ready to obey, and does obey to the fullest measure. Another feature is the confidence of the public in public health authorities, apparently the result of the intense education of the public in prophylaxis of disease which has been going on during the past decade. Orders concerning the epidemic are received without panic or alarm.—*Jour. A.M.A.*, Oct. 12, 1918.

The United States Government is resolved to do its best to restore every wounded American soldier and sailor to health, strength, and self-supporting activity.

Until his discharge from the hospital all the medical and surgical treatment necessary to restore him to health is under the jurisdiction of

the military or naval authorities, according to the branch of the service he is in. The vocational training, the re-education and rehabilitation necessary to restore him to self-supporting activity, is under the jurisdiction of the Federal Board for Vocational Education.

If he needs an artificial limb or mechanical appliance the Government will supply it free, will keep it in repair, and renew it when necessary. If after his discharge he again needs medical treatment on account of his disability, the Government will supply it free. While he is in the hospital and while in training afterwards the soldier or sailor will receive compensation as if in service and his family or dependents will receive their allotment.

A wounded soldier or sailor, although his disability does not prevent him from returning to employment without training, can take a course of vocational training free of cost and the compensation provided by the war-risk insurance act will be paid to him and the training will be free, but no allotment will be paid to his family.

Every Liberty Bond holder who holds his bond is keeping up a part of this great work of restoring to health, strength, and usefulness the men who have suffered for their country.

In the year past the Bureau has written nearly thirty-five billion dollars of this insurance, or approximately as much ordinary life insurance as there was outstanding with all the life-insurance companies in the world at the beginning of the year. Our Army and Navy are more than 90 per cent. insured and new applications are now being received for more than a billion dollars of this insurance per week.

The Bureau has made awards and is paying monthly compensation on more than 5,000 death and disability claims, and it is paying monthly installments of insurance on more than 9,000 insurance death claims.

To the Disabled Man:

Your handicap is not a handicap unless you are determined to make it one. The folks back home know that you do not wish to be a dependent idler for life, and the Government proposes to help you re-establish yourself in a civil employment as an independent worker with every opportunity for advancement. The

Government has provided hundreds of courses, among which there is one precisely suited to meet your needs, one in which you can become 100 per cent. efficient whatever injury you may have suffered.

You will not be compelled to take any training whatever, but you will be given expert advice and help in getting such training as you need, if you choose to take it. Your disability pension will not be reduced because you take training and learn to work. Your wages will be additional income, and your pension will continue in the same amount that will be paid if you do not take training. The training is free and you and your family will be maintained during the period of training.

More than thirty billion dollars of Government insurance has been written to date to protect America's fighting forces and their families. Approximately 3,400,000 insurance applications have been received by the Bureau of War-Risk Insurance of the Treasury Department up to the close of business.

In England the insurance companies regard the additional risk to men who have lost their hearing so negligible that they do not ask for any additional premium in cases where the infirmity is a result of war services.

Doctor W. J. Du Bois, Vice Chairman of the Council was called to Luther, Michigan, by Doctor Earl Fairbanks to do some operative work. While there he was suddenly attacked with the "flu" and was confined to Doctor Fairbanks' home for about two weeks, and is now slowly recovering. We wish to extend our best wishes for a speedy recovery.

The Federal Board for Vocational Education which has its headquarters at Sixth and E. streets, Washington, D. C., has been entrusted with the task of training and placing disabled sailors and soldiers in suitable employments. Through this Board every disabled soldier or sailor is entitled to the benefits of the War-Risk Insurance Act, the benefits of such of the following services as he may require; vocational advice and assistance in selecting a suitable occupation; help in returning to the old occupation again if advisable; support while in training for a new occupation or for greater proficiency in an old occupation; a course of preliminary training; a period of probationary employment; permanent employment in a desirable position; and follow-up work to protect him from mistakes and exploitations.

The Government has provided hundreds of

courses, and proposes to help them re-establish themselves in civil employment as an independent worker, with every opportunity for advancement.

Many of the men in France who have taken vocational training obtained better positions than before they went into service. The Director of Vocational Training in Canada states that many of the men who were common laborers before the war have through retraining been enabled to take positions of responsibility requiring not only skill but, what is more important, judgment.

Correspondence

November 4, 1918.

Dr. Charles E. Chadsey,
Superintendent of Schools,
Detroit, Michigan.

My Dear Dr. Chadsey:

I have been requested by Mayor Marx, and also by a resolution of the Board, to thank you and those teachers of your staff who volunteered to help this Department in the present epidemic.

While the condition which the teachers volunteer organization was formed to cope with has, fortunately, not been reached in Detroit, the results actually achieved have not only repaid for the work done in forming it, but have shown what its value would have been in preventing the terrible distress which has been reported from eastern cities.

It was Detroit's duty to prepare for the worst that could happen. Reports received daily from health departments of eastern cities showed that the regular machinery for fighting epidemics was entirely inadequate, and that the medical and nursing forces of those cities were completely swamped. Thousands of cases were unattended and many reports were brought in daily of bodies being found lying in houses—some of them having been dead as long as a week—with every other person in the house seriously sick.

In one eastern city the daily death rate reached 766, with 4,578 deaths in one week. In another city the daily list reached 711, with 4,599 deaths in one week. Hundreds of bodies laid for days in the city morgue because there was no way of getting them buried or even incased in coffins. Cemeteries had from one to two hundred unburied bodies on hand at a time and had to call on city employees to dig graves.

The health officer of Lynn, Massachusetts, on visiting this city, reported that he had been compelled to dig long trenches to lay bodies in side by side and his advice to Detroit was to get ready to take care of thousands of unattended sick. Other cities reported similar conditions. To meet such a situation in Detroit, prevent such distress and keep our war work going, it was recognized that some large volunteer body must be formed at once—to wait until it developed would be too late.

The mobilization of all who would volunteer from the city's teaching force was thought of, and after assurances of your co-operation, was decided upon. Objection was made that teachers visiting homes of the sick were being subjected to danger. This fact had not been lost sight of. The men who go to France are also being subjected to danger, but they must go, and the women who volunteered—none but volunteers were accepted—were just as truly enlisting in the war as the men who cross the ocean, for to keep up the health of the city and protect the 150,000 war workers in Detroit is a vital part of the war.

The smoothness and rapidity with which this great organization of nearly 2,000 people got down to practical work was surprising. In the few days—practically four—that the organization was at work, it made over 100,000 calls. It investigated and made report on 15,647 cases. It found 434 families where medical aid and nursing care, food or material relief was needed. These cases were of varying distress, the first one found showing a man dead of influenza with wife and four children sick and no medical or other care. Upon reports made by the organization 131 patients were sent to hospitals.

This magnificent record of work actually accomplished stamps the organization as being not only the largest, but by far the most efficient and effective fighting force that has been marshalled at any point in the United States to fight the present epidemic. With such a force, capable of visiting every home in the city in four or five days, and with co-operating organizations standing ready to supply all wants discovered, the scenes of distress witnessed in eastern cities would have been impossible in Detroit, and the epidemic could not have spread as it did in cities where thousands of families were unattended.

Permit me, on behalf of this Department, and by direction of the Mayor, on behalf of the city of Detroit, to sincerely thank you and the teachers of your staff, not only for the service they did render, but for the patriotic offer of a still greater service, which, fortunately, has not been needed.

Will you kindly bring this letter to the attention of all the teachers of your staff. With personal regards, I am,

Very sincerely yours,

J. W. INCHES,
Commissioner of Health.

November 13, 1918.

From: Mr. Charles H. Conner, Chief, Platinum Section, and Lieut. Col. F. F. Simpson, M.C., U. S. A., Chief of Section of Medical Industry.

To: The Doctors and Dentists of the Country.

Subject: Cancellation of Appeal for the Collection of Scrap Platinum.

1. The Platinum Section and the Section of

Medical Industry, War Industries Board, desire to express appreciation of the hearty response made by physicians, dentists and others when the call for scrap Platinum was made.

2. As the Governmental demand for Platinum in the making of explosives, etc., has been tremendously decreased by the curtailed war program, it is requested that no further scrap Platinum be tendered to the Government through the channels indicated in our communication of September 17th, 1918.

CHARLES H. CONNER,
Chief, Platinum Section.

F. F. SIMPSON, M.C., U. S. A.,
Chief of Section of Medical Industry.

Deaths

Doctor John C. Brown, of Battle Creek and a member of the Calhoun Medical Society died October 29th.

State News Notes

CONVICTED OF PRACTICING MEDICINE.

Harold Jackson (Olio de Gahiliani) convicted of practicing medicine under firm name of Electro-Medical Doctors Detroit, was given a fine of \$200 and six months sentence in the Detroit House of Correction. Notice of appeal was taken but bail denied. In the meantime Jackson is serving out his sentence. Several other cases will be started upon his release six months from this.

November 13th, 1918.

Major W. T. Dodge, formerly of Big Rapids, now Chief Surgeon at the Base Hospital, Camp Sherman, Chillicothe, Ohio, and Mrs. Anna Foster, of Reed City, were married October 18th in Detroit, Michigan.

Doctor Louis J. Hirschman, Major M. C. U. S. A. has returned from "over there" and is again located in the Kresge Building, Detroit, Michigan. He will limit his practice to abdominal surgery and enteroproctology.

It is probable that the epidemic of Spanish Influenza may cause some radical changes in Michigan's health laws.

Pontiac is the latest city in Michigan to join the ranks of the places where a permanent anti-tuberculosis clinic has been established.

The Michigan State Medical Society would endorse the action taken by the Wayne County Medical Society in regard to the campaign against quack doctors.

Doctor H. M. Joy, Captain in the Medical Corps, formerly of Calumet, Michigan, has been transferred to the evacuation hospital at Camp Greenleaf, Georgia.

Doctor Ralph H. Pino will succeed Doctor Stewart Hamilton who has been commissioned Captain in the Medical Corps, as Superintendent at Harper Hospital, Detroit, Michigan.

Doctor Levi W. Gardner, of Harbor Springs, has been appointed local Health Officer to succeed Doctor E. A. Runyan, who resigned and moved to Flint, Michigan.

Doctor W. B. Clark, of Saginaw, has been appointed Medical Inspector for all of Saginaw County outside the city of Saginaw.

Doctor T. C. Lieu, interne at Grace Hospital, Detroit, Michigan, is the first Chinese physician to register under the Harrison Narcotic Law, in Detroit.

Owing to the ban placed upon all public meetings by the Governor of the State, there were no meetings of the various county societies.

Captain F. C. Warnshuis, our editor, has been promoted to Major, and word has been received that he arrived safely overseas.

Doctor Peter Vermeulen, of Grand Rapids, has been commissioned First Lieutenant in the Medical Corps.

Doctor A. J. Reynolds, of Flint, Michigan, has been commissioned a Captain in the Medical Corps.

Doctor Herbert E. Randall, of Flint, Michigan, has been promoted to Major.

Book Reviews

A TEXT-BOOK OF PHYSIOLOGY FOR NURSES. By William Gay Christians, M.D., Professor of Anatomy, Medical College of Virginia, and Charles C. Koshell, M.A., M.D., Professor of Physiology and Pharmacology, Medical College of Virginia. Illustrated. Published by C. V. Mosby Co., St. Louis. Price, \$1.75.

HYGIENE FOR NURSES. By Notie Muney, M.D., Lecturer in Hygiene, Chemistry, and Bacteriology, Logan H. Roots, Memorial (City Hospital) Training School; Assistant Instructor in Surgical Technic, University of Arkansas, Resident Physician of City Hospital and Member of Visiting Staff, Little Rock, Arkansas. With 75 illustrations. Published by C. V. Mosby Co., St. Louis. Price, \$1.25.

NURSING IN DISEASES OF CHILDREN. By Carl G. Leo Wolf, M.D., Chief of Clinic for Sick Babies and Children for the Health Department of the City of Buffalo, N. Y.; Instructor in Pediatrics, University of Buffalo Medical Department. With 72 illustrations. Published by C. V. Mosby Co., St. Louis. Price, \$2.50.

These three little books compromise a set that any nurse may be proud to have in her library and each very properly supplements the other. To

the superficial thinker it might upon first thought seem a simple matter to write a text-book for nurses, something that can be executed in an off-hand way with little need for searching references nor precise and accurate statements. It is far from simple, however, for the physician with his own point of view and his own hobbies and interests to place himself in the position of the nurse and consider the problem of making elementary, scientific facts clear and intelligible to her so that she can incorporate them in her conceptions of nursing skill. On the other hand it is equally difficult for one to imagine all the minor details of practice and method that a nurse desires instruction in unless he is constantly in touch with a nurse's training school himself.

Very few, therefore, however talented and scholarly they may be are adapted to writing this type of medical text-book. It is decidedly in consideration of these requirements that we take delight in whole-heartedly recommending these three text-books.

ABSTRACTS OF WAR SURGERY. Prepared by the Division of Surgery, Surgeon-General's office. Cloth. Price, \$4.00. Page. 434. St. Louis, C. V. Mosby Company, 1918.

This is a compilation from the Journals of the American, English, French and Italian. It is a condensed text-book for ready reference. It is up to date in all departments of war surgery and should serve the busy practitioner in all emergencies.

HEADACHES AND EYE DISORDERS OF NASAL ORIGIN. By Greenfield Sluder, M.D., Clinical Professor and Director of the Department of Laryngology and Rhinology, Washington University Medical School, St. Louis, 272 pages with 115 illustrations. C. V. Mosby Company, St. Louis, 1918.

To understand and successfully treat the nose one must have a thorough knowledge of this anatomical complex region. The author has made himself a careful student and has elucidated many things that were obscure, exceedingly plain. The nervous element entering into the causative factor of headache are graphically portrayed in the syndrome of ganglionic neurosis. The hyperplasia of the mucosa which are so often intractable are made plain and the relief to be obtained from the vacuum frontal headaches presents to the reader a long-felt want.

The volume is a very useful adjunct to the specialist and general student of these difficult anatomic points.

THE COMPOSITION OF CERTAIN PATENT AND PROPRIETARY MEDICINES. Compiled by John Phillips Street, Chemist in charge of Analytical Laboratory, Connecticut Agricultural Experiment Station. 274 pages; more than 2,500 remedies; over 3,100 analyses. American Medical Association, 535 North Dearborn St., Chicago. Cloth, \$1.25, postpaid.

While the A.M.A. Journal has laboriously continued the fight against the patent medicine venders and the street corner fakers, it is pleasant to think what once existed but now is nearly eliminated. In looking over this work many familiarities appear; Lydia Pinkham, Piso's Eye Salve, a sure cure for piles, and a score of others. Human nature is always the same and there are still the credulous ones. This work on the fakers' income

is an amusement and should be read and stored as medical history.

SURGICAL CLINICS OF CHICAGO, VOLUME II, NUMBER IV. Comment is unnecessary as this is so valuable a volume to every practitioner that he can not afford to be without a copy of same.

ROENTGEN DIAGNOSIS OF DISEASES OF THE HEAD. By Arthur Schüller. Translation by Fred F. Stocking, M.D., M.R.C. Approved for publication by the Surgeon General of the United States Army. Published by C. V. Mosby Company, 1918.

This book is very welcome in that the subject has developed to date only a limited literature.

The author takes up in a painstaking manner first the normal skull, then the non-pathological variations, then the pathology due to external and local etiology. The anatomical handling reminds one of Gray while the careful detailed consideration of the skull pathology makes one think of Ziegler.

The book is 300 pages long and contains 97 illustrations but there is no attempt at treatment advice. We surely have here a distinct addition to our Roentgen Literature which ramifies in many other directions and we wish to thank those of our profession who helped make the above book possible.

THE WASSERMANN TEST. By Charles F. Craig, A.M. (Hon.), M.D. (Yale), Lieutenant Colonel, Medical Corps, United States Army; Fellow of The American College of Surgeons; Formerly Assistant Professor of Bacteriology and Pathology, Army Medical School, and George Washington University; Commanding Officer, Department Laboratory, Central Department, United States Army, Fort Leavenworth, Kansas. Cloth. Price, \$. 239 pages with 13 illustrations. St. Louis, C. V. Mosby Company, 1918.

This work is from the pen of a syphilographer, who presents the subject in as practical a manner as possible. As stated in the preface, the author has quoted from some of the more recent investigators on the subject for his material, and has added his personal views and experiences; conservatism is shown in all important procedures. The chapters on the effect of treatment upon the Wassermann reaction, and the Wassermann test upon the cerebrospinal fluid, are well written and show a careful, clinical and experimental study of the subject.

Miscellany

SURGEON GENERAL ISSUES HEALTH RULES.

In connection most immediately with precautions against the spread of so-called "Spanish Influenza," but more generally in relation to the anti-tuberculosis campaign, unusual interest and importance attaches to the following rules for the avoidance of respiratory diseases which were issued by the Surgeon-General of the Army on September 21.

1. Avoid needless crowding—influenza is a crowd disease.
2. Smother your coughs and sneezes—others do not want the germs which you would throw away.
3. Your nose, not your mouth, was made to breathe through—get the habit.

4. Remember the three C's—a clean mouth, clean skin, and clean clothes.
5. Try to keep cool when you walk and warm when you ride and sleep.
6. Open the windows—always at home at night; at the office when practicable.
7. Food will win the war if you give it a chance—help by choosing and chewing your food well.
8. Your fate may be in your own hands—wash your hands before eating.
9. Don't let the waste products of digestion accumulate—drink a glass of water on getting up.
10. Don't use a napkin, towel, spoon, fork, glass, or cup which has been used by another person and not washed.
11. Avoid tight clothes, tight shoes, tight gloves—seek to make nature your ally, not your prisoner.
12. When the air is pure breathe all of it you can—breathe deeply.

BABIES IN A WAR INDUSTRIES TOWN.

The inadequacy of the protection afforded babies and the imperative need for more effective means of preventing the deaths of little children in one of the towns where conditions have been greatly changed by the growth of the war industries are revealed in a report on Waterbury, Connecticut, made public to-day by the Children's Bureau of the U. S. Department of Labor. Even before the war insanitary housing conditions, imperfect civic provision for educating mothers in the care of their children, indifference to the need of giving the many foreign born mothers the advice and help they need to make them assimilate American ways and customs have militated to keep up the infant death rate which averaged for the years 1910-15 146.5 per thousand or about one death in every seven live births, which is nearly half again the rate for the U. S. Registration Area.

But the rate was not uniformly high for all groups in the city. Two thousand one hundred and ninety-seven babies born between June 1, 1913, and May 31, 1914, were included in the study. In each case a personal visit to the home was made, and the mother, or if she were not living, the person who had the child in charge was interviewed. Rich and poor, native and foreign born were alike included and every one of them willingly gave the information desired. Two hundred and sixty-three of the babies had died before they were a year old. But of the babies of fathers who earned less than \$450 a year about one in six died during its first year, whereas when the father's yearly income was as much as \$1,250 the death rate was greatly reduced, and about one baby in every fifteen died. And a fifth of the births in Waterbury were in families where the father earned less than \$450 a year. By far the largest number of fathers in this lowest income group were employed in the factories. Waterbury is the largest brass and copper manufacturing city in the United States. The foreign born men were much more poorly paid than the natives. About a third of the foreign born fathers earned less than \$450 a year, whereas of the natives only about a twentieth belonged to this

low paid group. Few foreign born fathers were earning as much as \$1,050.

But low income is not the only influence working for a high infant mortality rate among the children of foreign born parents. The infant mortality rate among the Lithuanians as a whole, who form an important part of Waterbury's population, is far higher even than that for the lowest income group to which many of them belong. Of the babies born to Lithuanian mothers more than one in five died before it was a year old. The babies of Irish mothers died at a slightly lower rate. As a whole the babies of foreign born mothers died at a rate more than a third higher than that of the babies of native mothers.

The report points out several reasons for this higher rate among the children of the foreign born. The foreign born mother has to contend against more dangers to her child's health than those which usually threaten children of fathers whose earnings are low. The isolation of the Lithuanian group especially tends to keep the families from growing accustomed to their surroundings in this new country. Many of them have come from the free outdoor life of the farm to wrestle with crowded tenement conditions. The Lithuanians show the largest per cent. of babies fed artificially; they show also the largest per cent. of infant deaths caused by improper feeding, the neglect that comes with ignorance of modern hygiene, poor housing, combined, it may be, with summer heat against which other conditions have left the babies unprotected.

As a whole Waterbury shows an infant death rate from preventable digestive diseases considerably higher than that for the Registration Area. The fact that modern hygiene knows how to prevent certain digestive diseases of babies is used as an argument for extending work that will give every mother the knowledge without which she can not protect the lives of her babies.

Waterbury has not ignored the need for such civic work. It has a visiting nurses' association, and since the survey was made by the Children's Bureau the association has extended its work. Few of the Lithuanians, however, who appear to be most in need of wise direction and advice in adapting their mode of living to the conditions in their adopted land have availed themselves of the organization's services.

The housing conditions in Waterbury were seriously congested even before the influx of war workers. Disrepair of buildings, inadequate and faulty plumbing, infrequent and irregular garbage collection, a milk or food supply that is insufficient or impure must, the report states, be controlled by the city if its citizens are to be guarded from disease. Yet in 1914 Waterbury appropriated only about a third of the recognized minimum for the work of its health department and in 1917 it appropriated even less per capita, in spite of its growing population. Even the greatly increased wages do not enable Waterbury's population to purchase healthful living conditions, without which the health of the community and the lives of the babies in it can not be conserved.

DRUG, CHEMICAL AND SURGICAL INSTRUMENT BUSINESSES WERE ESPECIALLY SOUGHT BY GERMANS—RICHARD KNY APPEARS TO HAVE BEEN VON BERNSTORFF'S FAVORITE.

A comparison of revelations made by the office of A. Mitchell Palmer, alien property custodian, in Germany, but is a naturalized American citizen the world war until the present shows a startling repetition of certain names among those representing German interests. These revelations have come at considerable intervals, so that only by a close comparison of the names involved does it become clear that the trail of the Imperial German Government left here by former Ambassador von Bernstorff, usually revolves around the same group. A name often mentioned in these revelations is that of Richard Kny. Kny is a well-known Brooklynite, living at No. 237 Garfield Place. He was born in Germany, but is a naturalized American citizen and the father-in-law of George Simon, an enemy alien, who was manager of the Heyden Chemical Works at Garfield, N. J., until they were seized by the alien property custodian.

It is said in authoritative circles that the work of unraveling the connections of Kny and his attempts to control the drug, chemical and surgical instrument business in the United States have been far more interesting and absorbing than any detective fiction ever written. The facts in Kny's case are said to have far outstripped the imagination of any literary dreamer in working out international plots and situations.

The four principal companies in which Kny has been found to be either the head or heavily interested are the Heyden Chemical Works, Garfield, N. J.; Eiseman Magneto Co., New York; Kny-Scheerer Co., New York, and the Chemical Exchange Association, the last-named being the camouflage devised by Kny and Dr. Hugo Schweitzer to control the carbolic acid supply of the United States and prevent it from going into the manufacture of munitions to be used against Germany. The official revelations in connection with this last-mentioned concern were made public by Mr. Palmer on October 18th.

The cunning and secret work of Kny and his associates was so well covered up that only the most careful work on the part of Mr. Palmer's assistants succeeded in uncovering it. The question which now interests the drug, chemical and surgical instrument trade is whether or not other companies will be found to be the property of the same crowd of aliens with which Kny was associated and which are believed to be responsible for the long list of explosions, burnings, ship sinkings and other outrages which have infuriated the people of the United States nearly every week since the war began.

The Kny-Scheerer Corporation, one of the biggest dealers in surgical and electro-medical instruments, scientific apparatus, hospital and sanitarium supplies in the United States with offices at No. 404 West Twenty-seventh Street, New York, used the identical trademark as the Jetter & Scheerer Co., of Tuttlingen and Berlin, Germany. This trade-

mark appears on the letter-head of the Kny-Scheerer Corporation and appears in the advertisements inserted in German technical publications by the Jetter & Scheerer Co., of Germany. Official investigation has shown within the past few days that both of these companies are still using this trademark.

The Kny-Scheerer Corporation had the exclusive American agency for the products of its parent concern, the Jetter & Scheerer Co. The German concern claimed to be controlled by the German Government and E. S. Beck, its secretary.

Evidence now in the hands of the alien property custodian shows conclusively that the Imperial German Government, through careful investments made by Ambassador von Bernstorff in this country, tried and almost succeeded for a time in controlling the drug, chemical and surgical instrument business of this country and imperilling the supplies of these articles required by the army and navy of the United States. It is believed the master brains who advised von Bernstorff and Dr. Albert, the official German go-between, were Dr. Hugo Schweitzer, former chemist of the Bayer Company, and Richard Kny.

The cleverest deal with which Kny has so far been connected by Federal officials is that which was put through in the case of the Heyden Chemical Company. This concern has an office at No. 135 William Street, Manhattan, and a large plant at Garfield, N. J. It was owned for many years by the Chemische Fabrik von Heyden, of Germany, and was managed by George Simon, son-in-law of Richard Kny. When the Government seized this plant some weeks ago, it was found that an elaborate effort to disguise the German ownership had been made by Simon. The company was an exceedingly prosperous one and in 1917 did a business in excess of \$4,000,000. The profits sent to the German owners in 1916 were \$1,026,626.

When Francis P. Garvan investigated this deal for Mr. Palmer, he discovered Simon had obtained \$149,000 in cash from his father-in-law at the time of the breaking of relations between the United States and Germany with which the German owners were alleged to have been bought out. This deal was knocked in the head by the action of the Government in seizing the plant and preparing to sell it to owners known to be real Americans.

While Federal officials in touch with developments in the investigation into Germany's hold on the American drug, chemical and surgical business refuse to make any comments in advance of official announcements, it is plain that further disclosures are expected regarding the chain of industries over which von Bernstorff gained an evil sway. In view of the uniformity with which the same group of men were used by him in putting through the deals already uncovered by Mr. Palmer's men, there is little reason to doubt that the same agents will be found to have been used in the deals which are known to have been made, but which have not yet been officially announced. In the meantime the drug and affiliated lines are looking forward with a good deal of interest to the result of the investigations now under way.

This should be a warning to the medical profession to investigate when purchasing medical and

surgical supplies, and to pledge themselves to use only made in America goods. The ramifications of the German intrigue has been so great and insidious that the busy doctor in many instances failed to consider that the contribution of his little mite primarily did amount to something as in the aggregate it represented millions. We should in the future discriminate against anything that savors Germany as articles in our line just as good if not better can be obtained in our own country instead of giving them our patronage.

(Deaths in America greatly outnumber war's casualties among American troops.)

The influenza epidemic has thus far taken a much heavier toll of American life than has the Great War. The total loss of life throughout the country is not known, but the Bureau of the Census has been publishing, for 46 large cities having a combined population estimated at 23,000,000, weekly reports showing the mortality from influenza and pneumonia. These reports, which cover the period from September 8 to November 9, inclusive, show a total of 82,306 deaths from these causes. It is estimated that during a similar period of time the normal number of deaths due to influenza and pneumonia in the same cities would be about 4,000, leaving approximately 78,000 as the number properly chargeable to the epidemic.

The total casualties in the American Expeditionary Forces have recently been unofficially estimated at 100,000. On the basis of the number thus far reported, it may be assumed that the deaths from all causes, including disease and accidents, are probably less than 45 per cent. and may not be more than 40 per cent. of the total casualties. On this assumption, the loss of life in the American Expeditionary Forces to date is about 40,000 or 45,000.

Thus, in 46 American cities having a combined population of only a little more than one-fifth the total for the country, the mortality resulting from the influenza epidemic during the nine weeks' period ended November 9 was nearly double that in the American Expeditionary Forces from the time the first contingent landed in France until the cessation of hostilities.

For the 46 cities taken as a group, the epidemic reached its height during the two weeks ended October 26, for which period 40,782 deaths were reported—19,938 for the week ended October 19 and 20,844 for the following week. Since October 26, however, the decline has been pronounced. During the week ended November 2, 14,857 deaths occurred, and during the following week only 7,798. The only city in which the number of deaths reported for the week ending November 9, exceeded the number occurring during the previous week was Spokane, Washington.

In general, the epidemic traversed the country from east to west. In a number of eastern cities—notably Boston, where the greatest mortality occurred during the week ended October 5—the largest numbers of deaths were reported for earlier periods than that which covered the height of the epidemic for the 46 cities taken as a group. On the other hand, in New Haven, New York, Pitts-

burgh, and Rochester the maximum mortality occurred somewhat later than in eastern cities generally. In Baltimore, Buffalo, and Philadelphia the two-weeks' period ended October 26 showed the greatest number of deaths. For the entire nine weeks' period, the greatest mortality due to the epidemic, in proportion to population—7.4 per one thousand—occurred in Philadelphia; and the next greatest—6.7 per 1,000—was reported for Baltimore.

The present epidemic, as was to be expected, has given rise to the publication in the newspapers of all kinds of "sure cures." Their number is legion, and they vary in character from those with a semi-scientific basis to others with no basis whatever. The research worker should view his results with a cold, dispassionate conservatism, before considering publication with resultant harm to himself and the public. The United States Public Health Service, having been besieged with inquiries regarding this and that method of treatment, has issued a special bulletin in which it is emphasized that there is no specific cure for influenza yet known and the chief reliance must be placed on good hygiene, good nursing and symptomatic treatment.—From Editorials in the *Journal A.M.A.*, November 2, 1918.

We would refer our readers to the editorial "Observations on the Present Epidemic of So-Called Influenza in Europe," and an article in regard to the value of vaccination against influenza under the heading of "Current Comment" appearing in the *Journal of the A.M.A.* of November 9th.

Last week the deaths of eighty-one physicians were recorded in the *Journal of the American Medical Association*. This week the deaths of 174 physicians are recorded making a total of 255 in two issues, and of these 154 are definitely known to have been due to influenza or pneumonia; undoubtedly in the majority of cases in which the cause is not given, it was influenza. These obituaries are records of sacrifice to duty. A layman may, if he desires, keep from exposing himself to any infection; but the physician must go when called without thought of consequences to himself. However, as one considers the list one wonders whether or not some of these deaths might have been prevented by adopting some of the simple precautionary methods that have been suggested, such as the wearing of the face mask. It is proverbial that physicians like preachers, give advice which they themselves do not consistently follow.—From the Editorials in the *Journal, A.M.A.*, November 2, 1918.

The Madrid correspondent of the *Journal* wishes it clearly understood that Spain does not care to take the responsibility for having initiated the present epidemic of respiratory disease. His protestations are both informing and amusing. The Paris correspondent, feels too that the onus of responsibility should not be placed on Spain since the epidemic occurred both in France and in Germany. As one views the devastation which the disease has caused he is inclined to sympathize with the

efforts of Spain or any other country to pass the buck.—From Editorials in the *Journal of the A.M.A.*, November 9, 1918.

Damage to Trees From Tarred Streets.—The injurious effects of tarred roads upon neighboring vegetation have been described in numerous articles emanating from both American and European sources. The damage is caused almost, entirely by the very fine dust raised by the passage of motor cars. This dust settles slowly and is most abundant on low plants and the lower branches of trees. Once deposited, the small particles of tar give off injurious vapors when strongly heated by the sun. Plant and parts of plants not directly reached by the sun never show this damage, while plants exposed to the sun are injured in proportion to the intensity and the duration of sunshine. The best remedy is to keep down the dust by the regular and abundant watering of the roads.

THE RED CROSS INSTITUTE FOR THE BLIND.

The purpose of the Red Cross Institute for the Blind is to supply the necessary economic and social supervision of blinded marines, sailors, and soldiers, after their discharge from military service. The Institute will work in conjunction with the Surgeons General of the Army and Navy and is, therefore a national activity of the American Red Cross.

This work will begin as soon as a sailor, soldier, or marine who has lost his sight, returns. His past life will be studied in order to ascertain his previous occupation, his stability as a workman, his former wages, his moral career, his social environment both before and after his entrance into the Army or the Navy and that to which he must return, his military or naval record, and the occupational possibilities of his home community. The present wages of the average blind man are deplorably low. New fields must be explored and new occupations discovered in order to help the blind to become self-supporting wage earners.

A manufacturers' commission is being formed, the personnel of which is to be drawn from among large manufacturers, and this commission will co-operate with the National Manufacturers' Association and other organized bodies of manufacturers. The average business man stands in awe of a blind man and is afraid to employ him because if the man fails to "make good" he "would hate to discharge him." The Institute will, therefore, not only place the man, but, if he proves inefficient, it will itself remove him, thereby relieving the employer of all embarrassment. The Institute does not believe in employing the blind on a charity basis. It should be strictly a business transaction.

Blind workers may be divided into five classes: those who can work in shops with the seeing, in shops maintained for the blind, in commercial enterprises, in agricultural pursuits, and those who can work only at home.

Books for the blind will be embossed. These will be in the form of technical and current literature. The Institute will co-operate with the Commission

on Uniform Type and the Matilda Ziegler Magazine for the Blind, the most widely read publication for current literature printed in embossed type in the country, to stimulate the production and distribution of reading matter for the blind. Blind men soon become despondent if they are not fully occupied. One of the most potent factors in the failure of many blind men is the lack of appreciation of their difficulties and mistaken sympathy on the part of their families. It is essential to provide against this obstacle of future success.

The first difficulty that will be experienced by the average individual upon leaving the Government Training School and starting his life work, will be to provide himself with the tools and materials of his trade. The Institute will provide such essentials through some fair arrangement.

The Red Cross Institute for the Blind is located at Baltimore, Maryland.

Medical and Agricultural Schools in West Africa.

—The American consul at Dakar, Senegal, reports that the French authorities have just established at that place a medical school and a school of agriculture, both for the education of natives.

Honey and Honey Plants.—According to an estimate of the U. S. Department of Agriculture, the honey crop of this country for 1918 will approximate 250,000,000 pounds. The AMERICAN BOTANIST points out, in this connection, that as the nectar of flowers does not become honey until it is worked over and partly evaporated by the bees, these insects must move fully 150,000 tons of material during the season to make the honey crop, not including the honey consumed by the bees themselves. About half of this honey is produced from the nectar of white clover. Next in importance comes alfalfa, followed closely by sweet clover. These are all leguminous plants, as is logweed, which produces much honey in the tropics. Among the few plants yielding a honey that can be recognized are cotton, basswood, tulip tree, buckwheat, goldenrod and mountain sage.

NEW AND NON-OFFICIAL REMEDIES.

Solargentum-Squibb.—A compound of silver and gelatin containing from 19 to 23 per cent. of silver in colloidal form. It is used in solutions containing from 1 to 25 per cent. or more. It is also used in the form of bougies or suppositories. No precipitate is produced when sodium chlorid or albumin solutions are added to solutions of Solargentum-Squibb. E. R. Squibb and Sons, New York (*Jour. A.M.A.*, October 12, 1918, p. 1219.)

Phenmethylol.—A nonproprietary brand of benzyl alcohol complying with the tests and standards for benzyl alcohol. Hynson, Westcott and Dunning, Baltimore, Maryland.

Phenmethylol Ampules, 1 per cent.—H. W. and D. —Each ampule contains 5 cc. of a sterile solution of phenmethylol H. W. and D. 1 gm. in physiological

sodium chloride solution 99 gm. Hynson, Westcott and Dunning, Baltimore, Maryland.

Benzyl Alcohol.—*Phenmethylol*.—An aromatic alcohol occurring as an ester in tolu and other balsams, and produced synthetically. It is being used as a local anesthetic by injection and by application to mucous membrane. It is said to be practically non-irritant and non-toxic in the ordinary concentration and dosage. From 1 to 4 per cent. solutions in physiological sodium chloride solution are commonly used for injection anesthesia.

Phenmethylol Ampules, 2 per cent.—*H. W. and D.*—Each ampule contains 5 cc. of a 2 per cent. solution of phenmethylol H. W. and D. in physiological sodium chloride solution. Hynson, Westcott and Dunning, Baltimore, Maryland.

Phenmethylol Ampules, 4 per cent.—*H. W. and D.*—Each ampule contains 5 cc. of a 4 per cent. solution of phenmethylol H. W. and D. in physiological sodium chloride solution. Hynson, Westcott and Dunning, Baltimore, Maryland. (*Jour. A.M.A.*, October 19, 1918, p. 1313).

Pneumococcus Antigen (Rosenow), Lilly.—A pneumococcus vaccine prepared by digesting a suspension of pneumococci until the bacteria are partially autolyzed. E. C. Rosenow believes that the protective power of this vaccine is greater than that of one prepared in the usual way. It is marketed in 5 cc. vials, each cc. containing 20 million partially autolyzed pneumococci. Eli Lilly and Co., Indianapolis (*Jour. A.M.A.*, October 26, 1918, p. 1407).

In a recent number of the "Presse Medicale" for January 31, 1918, Lapersonne advocates the use of Chlorazene as a disinfectant in the treatment of ocular infections, such as purulent ophthalmia and corneal ulcers. He found that this antiseptic gave very successful results and was virtually free from irritating effect even in strong solutions, in fact he uses it in a concentration of one per cent. and sometimes even stronger. However, for ordinary eye work a solution of 1:1000 to 1:250 will be found sufficiently strong, and this will give results which can not be obtained from boracic acid or from the simpler and much feebler antiseptics now generally in use.

Chlorazene is becoming more and more widely used as an antiseptic for virtually all purposes. It is manufactured by The Abbott Laboratories, Chicago, Illinois.

"OH SAY, CAN YOU?"

Oh, say, can you sing from the start to the end,
What so proudly you stand for when orchestras
play it;

When the whole congregation, in voices that blend,
Strike up the grand hymn, and then torture and
slay it

How they bellow and shout when they're first
starting out,

But "the dawn's early light" finds them flound-
ering about,

'Tis "The Star-Spangled Banner" they're trying to
sing,

But they don't know the words of the precious
old thing.

Hark—The "twilight's last gleaming" has some of
them stopped,

But the valiant survivors press forward serenely
To "the ramparts we watched," where some others
are dropped

And the loss of the leaders is manifest keenly.
Then "the rockets' red glare" gives the bravest a
scare,

And there's few left to face the "bombs bursting
in air"—

'Tis a thin line of heroes that manage to save
The last of the verse and "the home of the brave."

HUSH! HUNS ARE SEVEN MILES AWAY.

An American colonel, newly arrived in France, on his first tour of inspection, approached a sentinel squatting behind a hedge and started to question him.

The Yankee shot back a reply in a husky whisper. Immediately the colonel flattened out on the ground with more haste than dignity.

After exchanging a few breathless whispers with the sentinel, the colonel whispered:

"How far are the Huns from here?"

"About seven miles," the sentinel whispered back.

"Then why the — are you whispering?" the officer stormed.

"Been like this for weegs; godda heluva gold," replied the soldier, wiping his nose.

There are times when the greatest of all feats of strength is holding one's tongue, and thus proves that "silence is golden."

Dear Sir:

I am practicing medicine in New York City. How do I file claim for exemption because of need by the community? L. Iar.

Answer—We do not see how you could get away with it. Not unless the remaining 6,000 doctors have all joined the Army.

INDEX

VOLUME XVII, JANUARY TO DECEMBER, 1918

O. Original. E. Editorial. Ah., Abstract.
Mis., Miscellaneous.

A

	Page
Abortion, Causes of. James E. Davis, O.	2
Abortion, Improper Treatment of. James E. Davis, O.	478
Acute Abdomen, Remarks on the F. Gregory Connell, O.	349
Annual Meeting, Program.	229
Annual Meeting, Minutes of 53rd.	264
Annual Meeting, Notes.	274
Anthrax, Case of. W. T. Dodge, O.	482
Aorta, Diseases of. Analysis of Fifty-Four Cases. Walter J. Wilson, Jr. O.	468
Aortic Insufficiency, Brachial and Femoral Pressures in. W. F. Koch, O.	474

B

Blood Pressure, The Technic of Taking. William R. Vls. O.	260
Blood Transfusion in the Small Town Hospital. W. L. Flinton, O.	423
Butterworth Orthopedic Clinic. Resume of Five Years of. William E. Blodgett, M.D. O.	461

BOOK REVIEWS—

American Medical Association. New and Nonofficial Remedies.	246
American Medical Association Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the A.M.A. for 1917.	246
Anders, James M. A Text Book of the Practice of Medicine.	180
Aaron, Charles A. Diseases of the Digestive Organs with Special Reference to Their Diagnosis and Treatment.	180
Allen, Carroll W. Local and Regional Anesthesia Including Analgesia.	384
Barton, W. M. Manual of Vital Function Testing Methods and Their Interpretation.	245
Bearce, Richard Mills; Edwin Bell Krumhaar, and Charles Harrison Frazier. The Spleen and Anemia.	181
Bernheim, Bertram. Blood Transfusion.	181
Bliss, A. R. A Laboratory Manual of Qualitative Chemical Analysis.	384
Bundy, Elizabeth R. Surgical Nursing in War.	79
Cornwal, Edward E. A Clinical Treatise on Diseases of the Heart for the General Practitioner.	79
Carter, Herbert S., Paul E. Howe, and Howard H. Mason. Nutrition and Clinical Dietetics.	79
Carrell, J. D. and Anne. Technic of the Irrigation Treatment of Wounds by the Carrell Method.	79
Caille, August. Post Graduate Medicine.	179
Cushing, Harvey. Tumors of the Nervous Acusticus and the Syndrome of the Cerebellopontile Angle.	180
Cabot, Richard C. Differential Diagnosis.	289
Christians, William Gay and Charles C. Koshell. A Text-Book of Physiology For Nurses.	488
Craig, Charles T. The Wassermann Test.	489
DeTarnouskey, George. Military Surgery of the Zone of the Advance.	419
Eggleston, Cary. Essentials of Prescription Writing.	181
Fuchs, Hofrat Ernst. Text Book of Ophthalmology.	179
Greenwood, Allen, G. E. Schweinitz and Walter Parker. Military Ophthalmic Surgery.	79
Geiger, Charles G. Modern Operative Bone Surgery with Special Reference to the Treatment of Fractures.	289
Graves, William P. Gynecology.	419
Hartzell, M. B. Diseases of the Skin.	245

	Page
Hill, Lewis W. and Jesse R. Gerstley. Clinical Lectures on Infant Feeding.	180
Hirst, Barton Cooke. A Text Book of Obstetrics.	290
Joslin, E. P. A Diabetic Manual.	304
Kolmer, John A. A Practical Text Book of Infection, Immunity and Specific Therapy.	180
Koll, Irvin S. Diseases of the Male Urethra.	348
Keen, W. W. The Treatment of War Wounds.	385
Lippincott, J. B. & Co., International Clinics.	245
Lippincott, J. B. & Co., International Clinics.	419
Lippincott, J. B. & Co., International Clinics.	79
Lea & Febiger, Progressive Medicine, edited by H. A. Hare.	78
Lea & Febiger, Military Orthopedic Surgery, Medical War Manual.	119
Lea & Febiger, Laboratory Methods of the United States Army.	289
Lovett, Robert W. The Treatment of Infantile Paralysis.	79
Luys, Georges. Cystoscopy and Urethroscopy.	385
Mosby, C. V. Co. Abstracts of War Surgery.	489
Moynihlan, Sir Berkeley. American Addresses on War Surgery.	180
Maloney, William J. M. A. Locomotor Ataxia.	181
Morris, Robert T. The Way Out of War. Notes on the Biology of the Subject.	289
McDill, J. R. Lessons from the Enemy. How Germany Cares For Her War Disabled.	289
McCombe, Lt. Col. John, and Capt. A. F. Menzies. Medical Service at the Front.	289
Muney, Nottie. Hygiene for Nurses.	488
Norris and Landis. Diseases of the Chest and the Principles of Physical Diagnosis.	77
Practical Medical Series, Billings, DeLee and Fantus and Evans.	79
Perry, Maud A. Essentials of Dietetics for Nurses.	384
Roddy, John A. Medical Bacteriology.	79
Saunders, W. B. Co. Medical Clinics of North America, Volume I, Number IV. January.	247
Saunders, W. B. Co. Medical Clinics of North America, Volume I, Number IV. February.	246
Saunders, W. B. Co., Surgical Clinics of Chicago, Volume II, Number I.	246
Saunders, W. B. Co. The Medical Clinics of North America, Volume I, Number III.	77
Saunders, W. B. Co. The Surgical Clinics of Chicago, Volume I, Number VI.	78
Saunders, W. B. Co. The Medical Clinics of North America.	304
Saunders, W. B. Co. The Surgical Clinics of Chicago.	304
Saunders, W. B. Co. Collected Papers of the Mayo Clinic.	384
Saunders, W. B. Co. Surgical Clinics of Chicago.	420
Saunders, W. B., Surgical Clinics of Chicago, Volume II, Number IV.	489
Schuller, Arthur. Roentgen Diagnosis of Diseases of the Head.	489
Simon, C. E. Clinical Diagnosis.	245
Sluler, Greenfield. Headaches and Eye Disorders of Nasal Diseases.	488
Stokes, John H. The Third Great Plague.	78
Southard and Solomon. Neurosyphilis, Modern Systematic Diagnosis and Treatment.	79
Stiles, Percy G. The Nervous System and its Conservation.	290
Street, John Phillips. The Composition of Certain Patent and Proprietary Medicines.	489
Thornton, Edwin. A Pocket Formulary.	179
Todd, Jas. C. Clinical Diagnosis.	451
Thompson, W. H. A Treatise on Clinical Medicine.	289
Vedder, Edward W. Syphilis and Public Health.	304
Warbasse, James P. Surgical Treatment.	451

	Page
White and Martin's Genito-Urinary Diseases. By Edwin Martin, Benjamin A. Thomas, and Sterling Moorehead.	77
Weils, H. Gideon. Chemical Pathology.	289
Williams, J. Whitridge. Obstetrics.	119
Williams, Henry Smith. The Proteomorphic Theory and the New Medicine.	384
Wolf, Carl G. Leo. Nursing in Diseases of Children.	488
Zinsser, Hans. Infection and Resistance.	304

C

Carrel-Dakin Treatment of Infected Wounds, Personal Observation of the. Alexander Campbell. O.	5
Condyloma Lata and Condyloma Acuminata in a Patient with Syphilis and Gonorrhea, Report of a Case of. Joseph A. Elliot. O.	9
Calhoun County Medical Society Historical Sketch. W. H. Haughey.	157
Cicatricial Ectropion Corrected by Plastic Operation. Report of a Case of. George Siocum. O.	189
Cardiac Conditions that do not Disqualify for Army Service. Collins H. Johnston. O.	363
Case Reports of Two Instances of Kidney Calculi; one Exhibiting a Sequela of Primary Carcinoma and the other of Persistent Sinus Formation from the Ureter to the Epidermis. James E. Davis. O.	387
Country Surgery in a Country Hospital. W. J. Herring-ton. O.	438
Correspondence, 32, 65, 116, 172, 240, 287, 302, 380, 414, 449, 487	
Council Meeting.	105
Council Pictures.	197

COUNTY SOCIETY NEWS—

Bay.	74, 450
Branch.	75, 383
Calhoun.	75, 419
Clinton.	76, 450
Dickinson-Iron.	244
Eaton.	39, 383, 450
Gratiot-Isabella-Clare.	76, 118, 244
Houghton.	77, 244
Hillsdale.	289
Ingham.	29, 118, 178, 245, 348
Jackson.	178
Kent.	178
Kalamazoo.	40, 419, 450
Lapeer.	43
Manistee.	179
Muskegon-Oceana.	77
Sanilac.	77
St. Clair.	43, 119
Wayne.	450
Washtenaw.	179
Cystitis, Walter Lenehan. O.	475

D

Dermatological Malingering. H. R. Varney. O.	121
Duty of the Hour is Service, The. A. P. Biddle. O.	249
Differential Diagnosis of the Streptococcus, Staphylococcus and Pneumococcus Infections from a Clinical Stand-point. James E. Davis. O.	255
Dystocia of Cervical Origin—Etiology and Treatment of with a Report of Four Cases. Harold Henderson. O.	336
Dental Anomalies—Consideration of Some. C. J. Lyons. O.	370
Deaths, 38, 73, 117, 175, 242, 288, 303, 346, 347, 382, 417, 450, 488.	

E

Erysipelas, The Treatment of. Frank B. Tibbals. O.	1
Electrocardiography, The Clinical Application of. George E. Fahr. O.	10
Extravasation of Urine. William E. Keane. O.	429
Editorials, 31, 61, 111, 166, 235, 276, 297, 342, 377, 408, 443, 484.	
Editorial Comments, 32, 63, 114, 171, 239, 286, 300, 344, 379, 412, 449, 485.	
Eye, In Relation to General Diseases. D. Emmett Welsh. O.	480

F

Field Hospital, Fortnight in a. Alexander MacKenzie Campbell. O.	457
Fractures of the Skull. Leo J. Dretzka. O.	47
Future of Medicine, The. W. H. Smith. O.	52
Fragilitas Ossium with Report of Three Cases. Frank L. Rose. O.	307
Formaldehyde and Glycerine, The Use of in the Treatment of Wounds. A. S. Kitchen. O.	404

G

Gastric Disturbances as a Part of Central Nervous System Syphilis. L. H. Newburgh. O.	100
Group Medicine, The Development of the Private Pay Clinic. Alexander W. Blain. O.	354

H

Hydrophobia, A Report of a Case of. Harold DeB. Barss. O.	21
Hemangioma of the Tonsil. C. A. Campbell. O.	392
Hemorrhage, Case Report of, In Middle Ear. D. Emmett Welsh. O.	482
Hernia, Report of a Case of an Enormous Postoperative Ventral. L. L. Bottsford.	191

I

Intestinal Obstruction. I. N. Brainard. O.	129
---	-----

L

Leukemia Cutis with Demonstration of Case. J. E. Elliott. O.	19
Leukaemia. C. T. Foo. O.	84
Lipodystrophia Progressiva—Report of a Case with Observations. Blanch N. Epler. O.	356

M

Medical Work in Camp Custer. Lt. Col. C. J. Bartlett. O.	252
Miscellany, 45, 79, 119, 181, 247, 290, 305, 348, 385, 420, 451, 489.	

N

Nursing, Evolution of. E. L. Carr. O.	186
--	-----

O

Oral Sepsis. C. T. Pankhurst. O.	183
Organic Brain Diseases, Report upon the Clinical Symptoms and Anatomical Findings in Three Cases, Showing Disturbances of an Aphasic and Agnostic Type. Albert M. Barrett. O.	331

P

Prophylaxis of Venereal Disease. Frank R. Starkey. O.	82
Purulent Meningitis Complicating Mastoiditis—Recovery of a Case of. D. C. Walthall. O.	102
Pthisis Pulmonum, The Early Diagnosis of. J. L. Chester. O.	389
Procidentia Uteri, Surgical Treatment of. Hugh Hagerty. O.	391
Public Health Administration in Cities, An Outline of the Present Scope of. C. G. Parnall. O.	393

R

Page

Radiograms, Review of a Month's. James G. Van Zwaluwenburg. O.	28
Roentgenotherapy, A Brief Summary of the Indications for. James T. Case. O.	133
Roentgenology and the Internist. Charles D. Aaron. O.	81
Renal Calculus, Report of an Unusual Case of. Robert H. Baker. O.	140
Relations of the Medical Profession to the Municipally Controlled Medical School of Detroit, The. A. P. Biddle. O.	295
Roentgentherapy in Gynecology. George E. Pfahler. O.	320

S

Situs Inversus, Report of a Case of. W. O. Upson, M.D. O.	362
Smith-Indian Intra-Capsular Operation for Cataract, Some Remarks Concerning the. Frank Allport. O.	137
Syphilitic Paralysis of the Fifth Cranial Nerve. Carl D. Camp. O.	194
Surgical Conditions of the Knee Joint, Some Interesting. R. C. Andries. O.	291
Severed Right Femoral Artery. D. L. Stilwell. O.	296
So-Called Bladder Diseases. Simon Levin. O.	316
Simplified Method of Aspirating Gastric Contents in Hypersensitive Patients. C. D. Aaron. O.	440
Sketch of Battle Creek and Camp Custer.	149
State News Notes, 38, 73, 117, 175, 243, 287, 303 347, 383, 417, 450, 488.	

T

Typhoid Fever Receiving Intravenous Injections of Foreign Protein, A Case of. John B. Grant. O.	25
Tics or Habit Spasm. David Inglis. O.	58
Thyroid Hyperplasia—Data Obtained from the Observation of 531 Cases with Reference to Etiology of. Blanch N. Epler. O.	56
Tic Douloureux and its Treatment with a Review of the Cases Operated Upon at the Universal Hospital in 1917. Max M. Peet. O.	91
Treatment of Chronic Constipation with Psychotherapy, The. Mark Marshall. O.	141
Thyroadenoma of the Posterior Pharynx and Nose, Report of Two Cases of. A. C. Furstenberg. O.	146
Thyroid Gland, Some Unsettled Points in the Surgery of. Max Ballin. O.	463
Thyroid Gland with Special Reference to Goiter, The. Major J. Garland Sherrill. O.	309
Transverse Myelitis From a Bullet Wound, Report of a Case of. Charles L. Washburne. O.	334
Typhoid Fever, Diagnosis and Early Recognition. E. W. Haass. O.	397
Treatment of Bright's Disease. J. H. Dempster. O.	425
Test of Lahor. George Kamperman. O.	434

W

What the Medical Profession Owes the Country. Major Lewis W. Bremerman. O.	86
---	----

INDEX TO AUTHORS

A

Aaron, Charles D.	O. 81, 440
Allport, Frank.	O. 137
Andries, R. C.	O. 291

B

Page

Ballin, Max.	O. 463
Barss, Harold.	O. 21
Blodgett, William E.	O. 461
Bremerman, Major Lewis W.	O. 86
Brainard, I. N.	O. 129
Baker, Robert H.	O. 140
Bottsford, L. L.	O. 191
Biddle, A. P.	O. 249, 295
Bartlett, Lt. Col. C. J.	O. 252
Barrett, Albert M.	O. 331
Blain, Alexander W.	O. 354

C

Campbell, A. McK.	O. 5, 457
Case, James T.	O. 133
Carr, E. L.	O. 186
Camp, Carl D.	O. 194
Connell, F. Gregory.	O. 349
Chester, J. L.	O. 389
Camphell, C. A.	O. 392

D

Davis, James E.	O. 2, 255, 387, 478
Dempster, J. H.	O. 425
Dodge, W. T.	O. 482
Dretzka, Leo J.	O. 47

E

Elliott, Joseph A.	O. 9, 19
Epler, Blanch N.	O. 56, 356

F

Fahr, George E.	O. 10
Foo, Charles L.	O. 84
Furstenberg, A. C.	O. 146
Finton, W. L.	O. 423

G

Grant, John B.	O. 25
---------------------	-------

H

Henderson, Harold.	O. 336
Hagerty, Hugh.	O. 391
Haass, E. W.	O. 397
Herrington, W. J.	O. 438

I

Inglis, David.	O. 58
---------------------	-------

J

Johnston, Collins H.	O. 303
---------------------------	--------

K

Kamperman, G.	O. 434
Keane, W. E.	O. 429
Kitchen, A. S.	O. 404
Köch, W. F.	O. 474

L

Lenchan, Walter.	O. 475
Levin, Simon.	O. 316
Lyons, Chalmers J.	O. 370

M

Campbell, Alexander.	O. 5
---------------------------	------

N

Newburgh, L. Harry.	O. 100
--------------------------	--------

P

Peet, Max M.	O. 91
Pankhurst, C. T.	O. 183
Pfahler, George E.	O. 320
Parnell, C. G.	O. 398

R

Rose, Frank L.	O. 307
---------------------	--------

S

Smith, W. H.	O. 52
Starkey, Frank R.	O. 82
Slocum, George.	O. 189
Stilwell, Donald L.	O. 296
Sherrill, Major J. Garland.	O. 309

T

Tibbals, F. B.	O. 1
---------------------	------

U

Upson, W. O.	O. 362
-------------------	--------

V

Van Zwaluwenburg, James G.	O. 28
Varney, H. R.	O. 121
Vis, William R.	O. 260

W

Walthall, D. O.	O. 102
Washburne, Charles L.	O. 334
Welsh, D. Emmett.	O. 480, 482
Wilson, Walter J., Jr.	O. 468

15

